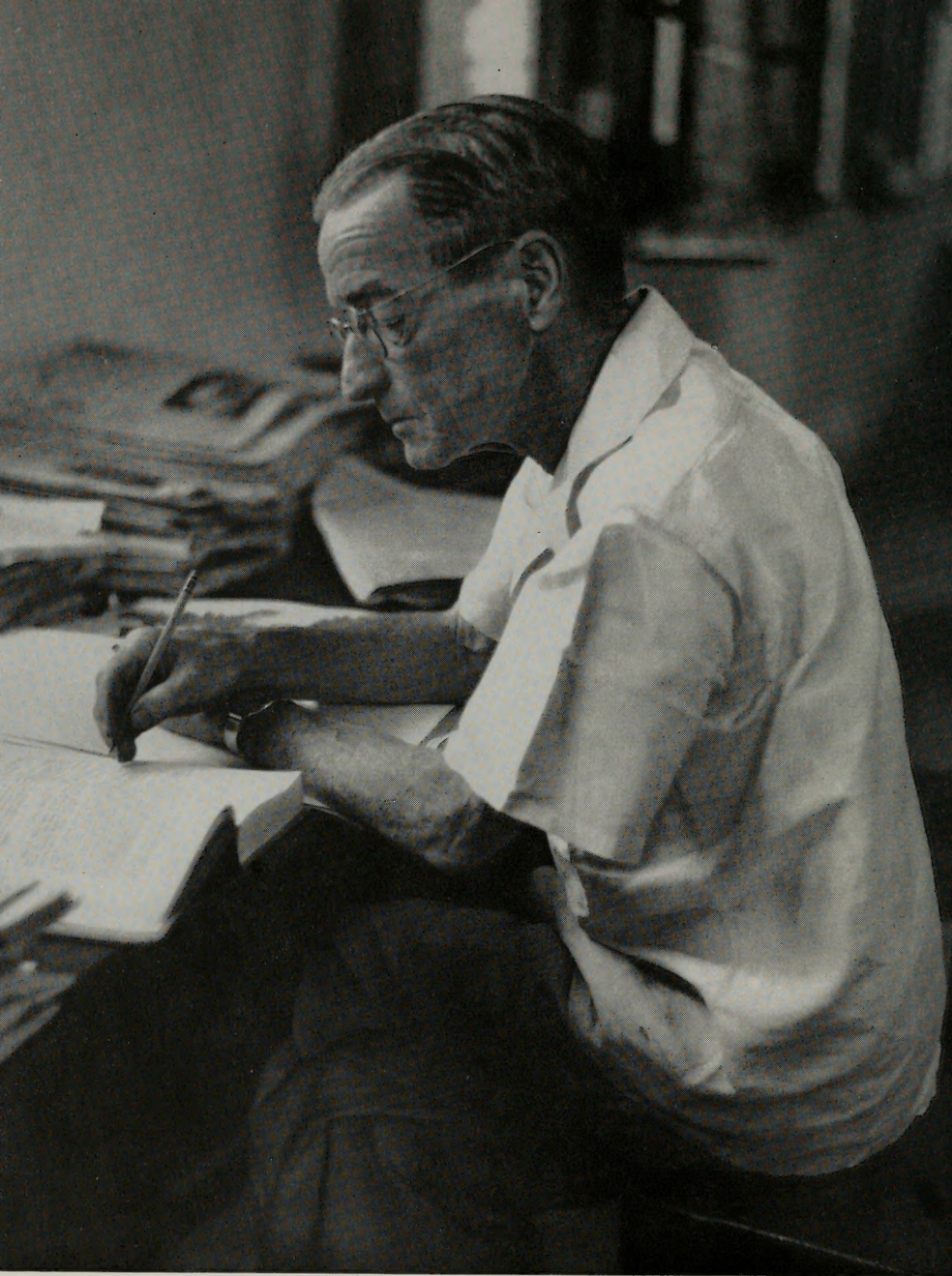


A detailed white line drawing on a dark green background. It depicts a woody branch with several large, ovate leaves showing prominent venation. Interspersed among the leaves are clusters of small, five-petaled flowers. A single flower is shown in a larger, more detailed view at the bottom center, revealing its internal structure. The overall style is that of a scientific botanical illustration.

Homage to STANDLEY

CHICAGO NATURAL
HISTORY MUSEUM



Photograph by Louis O. Williams

STANDLEY ABOUT 1952

Working in the herbarium at Escuela Agrícola Panamericana

Homage to STANDLEY

Papers in honor of
Paul C. Standley

Edited by
Louis O. Williams

CHICAGO NATURAL
HISTORY MUSEUM

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Homenaje a Standley

Homage to Standley

1884-1963

The collection of papers presented here is the result of a desire to honor one of America's best known and most prolific systematic botanists, for many years one of the driving forces behind the study of neotropical botany. Paul Carpenter Standley came to Chicago Natural History Museum in 1928 and retired at the end of 1950. Partial assessment of his contributions to knowledge of the botany of our tropics will be found in several of the papers to follow. He also wrote on the systematics of temperate regions in America, but the greater part of his life was given over to study of plants of the New World tropics. Standley was not only an outstanding student of the neotropical floras in the herbarium but he also made a large number of field trips, covering every country between the borders of the United States and Colombia. Upon his retirement from the Museum he went to Honduras to live, where he continued to work actively for several years more. It was there that he spent the remainder of his days.

In July, 1961, I wrote to about thirty persons who had known Standley, most of them botanists, to invite contributions to this projected paper. We are pleased that so many busy people have taken the time to contribute to this effort. We know that Dr. Standley would have appreciated it, and on our own part we wish to thank each of the contributors most sincerely.

It was our hope that these papers would be published while Standley was living, but that was not to be. They were written while he was living, some have been modified slightly by authors while others remain as they were originally.

La colección de trabajos que aquí presentamos es el resultado de un plan del Chicago Natural History Museum para honrar a uno de los más conocidos y más prolíficos de los botánicos americanos dedicados a la botánica sistemática, que por muchos años fué una de las fuerzas impulsoras de los estudios de la botánica neotropical. Pablo Carpenter Standley vino a este Museo en 1928 y se retiró al fin del año 1950. Parte del valor de su contribucción al conocimiento de la botánica de nuestros trópicos puede apreciarse en algunos de los trabajos que siguen. El escribió también sobre la sistemática de las regiones templadas de América pero la mayor parte de su vida la dedicó a las regiones neotropicales. Standley no solo fué un gran estudioso de las floras neotropicales en los herbarios, sino que también hizo un gran número de expediciones cubriendo todos los países comprendidos entre las fronteras de los Estados Unidos y Colombia. Después de su retiro del Museo fué a vivir a Honduras, donde continuó activo por varios años más. Es allí donde pasó el resto de sus días.

En julio de 1961 yo escribí a unas treinta personas de las que conocieron a Standley, mayoramente botánicos, invitándolas a contribuir a la realización de este trabajo entonces en proyecto. Nosotros estamos complacidos de que muchas personas muy ocupadas hayan podido dedicar unos momentos de su tiempo a este homenaje, y sabemos que el Dr. Standley lo hubiera apreciado grandemente. Por nuestra parte damos las gracias más sinceras a cada uno de los que han tenido la gentileza de cooperar. Especialmente damos las gracias al colega Dr. Patricio Ponce de León por su ayuda en la edición de estas páginas escritas en español.

Eran nuestros deseos que las contribuciones aquí presentadas se editaran en vida de Standley, pero esto no fué posible. Estas fueron escritas mientras él vivía, algunas han sido modificadas ligeramente por sus autores mientras que otras permanecen como fueron escritas originalmente.

LOUIS O. WILLIAMS

Paul C. Standley and His Work as Revealed Through His Letters

C. V. MORTON

Paul C. Standley's published works are numerous and almost uniformly lengthy major works, totaling many thousands of pages. However, he was not, as it might seem, a discursive writer like Fernald, for instance, who could and did go into long discussions concerning the history of past misidentifications of the various species he discussed, with pungent incidental comments on the merits or demerits of other workers, past and present. Fernald's writings revealed his own personality. Standley's writing, always professional and stylistically good, can only be described as business-like, in the best meaning of the term—concise, factual, and impersonal; consequently, it reveals little of Standley's own self.¹

Standley's letters are another matter. He was a voluminous correspondent with people that he liked, and his letters are extremely personal and full of humor and charm, with occasional sarcastic or biting comments regarding his contemporaries. Standley's voluminous letters to Maxon and Killip would make more interesting reading than those to me. It is

¹ Perhaps the nearest Standley ever came to being really critical in print were his remarks (Jour. Arn. Arb. 11: 29. 1930) regarding the treatment of the Mimosaceae by Britton and Rose: "The genus *Poponax* Raf. is recognized as distinct by Britton and Rose in their recent cactusization of the Mimosaceae, but there is no apparent reason why this or probably any of the other segregates should be separated from the long-established unit *Acacia*. In all, eleven segregates from *Acacia* are described in the third part of the volume 23 of the North American Flora, and many of them stand upon quite as trivial characters as the cactus segregates proposed by the same authors." The important word to note here is "cactusization," which is derived from the verb "cactusize," invented by the late William R. Maxon to describe the process of fragmenting or even pulverizing large genera of plants in the manner that Britton and Rose applied to the genera of Cactaceae. Cactusization has continued up to the present time as a popular sport among numerous amateur fanciers of the Cactaceae.

perhaps too bad that more volumes of letters by scientists are not published, even though some fur might fly; the public would learn that scientists are human and not completely isolated in ivory towers.

I do not have personally, of course, any letters from Standley regarding his earlier publications: the *Flora of New Mexico* (1916), the *Flora of the District of Columbia and Vicinity* (1919), the treatment of the Chenopodiaceae, Nyctaginaceae, Amaranthaceae, and Rubiaceae for *North American Flora*, the *Lista Preliminar de las Plantas de El Salvador* (1925), the *Plants of Glacier National Park* (1926),¹ the *Flora of Yucatan* (1930), or his most important work, the *Trees and Shrubs of Mexico* (1920–1926).² But from 1929 on I was in continuous correspondence with Standley in regard to all sorts of botanical questions. I have selected excerpts from this correspondence which will put some facts on record, and will help to show Standley's working habits and some of his views regarding his own works and other matters. Still, his prolific output can not be ex-

¹ And the allied *Flora of Glacier National Park, Montana*, Contr. U. S. Nat. Herb. 22: 235–438. 1921.

Jan. 31, 1929

² "Today I received from Dr. Wetmore a letter relating to the reprinting of the *Trees and Shrubs of Mexico*. . . . Of course, it is a shame that more copies of the first two parts were not printed and that the work is no longer available. Recently, I saw the complete volume offered for sale at twelve dollars [a still more recent price would be more likely \$50.00], which is certainly quite a reasonable price. Incidentally, it was the first time that I have ever seen the first two parts offered.

"Dr. Wetmore inquires whether in case the volume is reprinted I will be willing to make additions and corrections and to read the proof. Additions and corrections, yes, for there would be very few of them, unless I should take the matter of revision rather seriously. I should be glad to see the first two parts rewritten and expanded considerably. But you know what a difficult task it is to make emendations in a manuscript and how unsatisfactory.

"Reading the proof is a different matter. I shudder when I think of reading 1700 pages of 8-point type. It was bad enough the first time. Of course, I should have to ask for leave from the Museum to do the work, since no possible advantage to the Field Museum could ensue from the task, or else I should have to do it during annual leave or at night. Personally, I can not imagine any benefit that might accrue to myself from the republication and I think I could utilize the time to much better advantage on other work. I wish I had an opportunity to talk with you on the subject. What you say might cause me to take a different view."

In reply, Dr. Maxon agreed on the desirability of rewriting the first two parts and the reprinting of the others, but nothing came of it. The *Trees and Shrubs of Mexico* has just now (1961) been reprinted by the Smithsonian Institution by offset without revision.



Photograph by H. H. Bartlett

STANDLEY ABOUT 1910
At the United States National Herbarium

plained by working habits or otherwise except as an indication of genius. His facility for assimilating and writing down information was incomparable. Pioneer work in any field will always have a value even if it is full of errors, and much of Standley's work was pioneering, but the wonderful thing about Standley's is that it is so good. There are individual errors here and there but the overall picture is right, and the work will stand up well against that of any of his contemporaries.

Letters to C. V. Morton

Re HAENKE MEXICAN COLLECTIONS

Feb. 29, 1936

"Just now I am naming some 500 of Haenke's Mexican plants, of most of which we get duplicates. Nearly all of them, or at least the great majority, seem to have been collected at Acapulco. A good many of them must be type collections, although there is no means of proving that. Several of them, especially in *Eugenia*, are different from anything known from Mexico. I suspect they are good new species, but it is scarcely safe to name them so without some other collection to check their actual occurrence in Mexico. I have seen no plant in the lot that I am sure is not Mexican, although there are two or three about which I am skeptical."

Re SESSÉ AND MOCIÑO COLLECTIONS

May 20, 1936

"We have been worrying about running out of plants for mounting, but it will not be necessary to worry for a little while, anyhow. Yesterday we received from Madrid five large cases, containing a great variety of material. The principal element is the Sessé and Mociño Herbarium, some 7,000 sheets, just as it was left when they finished their work and tied up the packages. As I understand it, it has never been available to anyone before. The specimens have the authors' labels, with their names, so it will now be possible to find out what their names represent. I have looked over only one large package thus far, but I can now see why people have had dif-

difficulties in interpreting some of their descriptions. . . . It is going to be some work to name all the collection, for the work will have to be done critically. It should be well worth while, and a report will make a good publication.¹ However, if I had had any idea of the size of the herbarium, I doubt that I should have dared to take it on."

June 4, 1936

"In the Sessé and Mociño Herbarium, although most families are lavishly represented, with relatively little duplication of species, there are very few ferns, so far as I have been able to discover. The same is true for grasses. Maybe they didn't collect them, but that is hardly credible. Would you be willing to go over the ferns when they are mounted? I hope so.

"I should have mentioned that in the duplicates received recently from Madrid there are represented many of the types of Lagasca and Ortega, likewise those of Cavanilles."

Oct. 19, 1936

"I trust you may find the Sessé and Mociño plants interesting. In some groups they seem to be very good. We shall send on the Malpighiaceae as soon as I can sort out the main part of the herbarium. When I can actually begin work on the miscellaneous families is hard to say, for I have so much work ahead of me that I can see no possible end to it."

Dec. 4, 1936

"The ferns have come back just today, and some lots from other people should be here soon. I wish the whole manuscript were ready, for it could be printed at once, but there is a limit to what one can do.

"Now as to the matter of the Sessé and Mociño dates. How do you happen to be so confident regarding the actual

¹ This is one of the few major projects that Standley undertook and did not carry to completion. Some individual accounts of the Sessé and Mociño collections have been published by various authors (e.g. the ferns, by Maxon and Morton, *Amer. Fern Jour.* 45: 151-156, 1955) but nothing by Standley.

dates of publication of the *Flora Mexicana*? What reason is there for supposing that the Mexicans are any less honest in dating their publications than are people of the United States, such as the New York Botanical Garden, for instance, according to Fernald in a recent number of *Rhodora*, the last not a happy choice perhaps.¹

"No, I am afraid the *Flora Mexicana* was well known in Mexico before it ever began to appear in *La Naturaleza*. It was printed in 1887 in the establishment of Ignacio Escalante, and is described in a 'Scientific Bibliography of Mexico in the Nineteenth Century,' which was published in Mexico City in 1889! The second edition is reported (from Mexico City authorities in a letter) to have been issued in 1894. The *Plantae Novae Hispaniae* is on less solid ground as to its dates, and unless something can be proved to the contrary there is nothing to do but take the dates of the title pages.² The other edition of *Plantae Novae Hispaniae* I did not have at hand when preparing the manuscript, but all four are here now.

"Whether there are in any of our libraries a copy of the 1887 edition of the *Flora Mexicana* I do not know, nor do I know whether it differs in pagination from the parts issued with *La Naturaleza*. I surmise that both are from the same plates, but have no proof. Fortunately, after all is said and done, the American people probably will be just as happy this time next year, whether the title page dates are right or not. I am not going to waste any sleep worrying about them, for they are just as important to the world at large as the marriage of the King of England!"

May 27, 1942

"Very many thanks for your work on the Sessé and Mociño *Smilax*, *Hybanthus*, and *Viburnum*. I have myself just about lost interest in the collection, largely perhaps because I see no like-

¹ The reference is to Fernald's article "Dates of Publication of Rydberg's *Flora* of the Rocky Mountains and Adjacent Plains," *Rhodora* 38: 329. 1936; the reason that it is not a happy choice is that the wrong dates on the title-pages were unavoidable and not the fault of the Garden.

² Concerning the dates of these publications, see "The Publication Dates of 'La Naturaleza,'" by Hobart M. Smith, *Lloydia* 5: 95, 96. 1942.

lihood of having to return it soon to Madrid! Perhaps some day I shall get around to finishing the report on it. A good proportion of the collection has been named. I hope some way may be found of adopting a suggested article of the International Rules to throw out the Sessé and Mociño flora, along with various other things. Of course, when the report is published, I shall see to it that printing of the unpublished names is avoided. That can be done by circumlocution, or if not, then by omission of the label names. Such people as Pennell even, I think, erase ink obliterations to look for names hidden under them that they can publish to clutter synonymy."

Re FLORA OF COSTA RICA

Apr. 15, 1937

"I have turned in to the printer the first part of the *Flora of Costa Rica* for printing. If you have any descriptions of new Costa Rican species in any families up to and including Meliaceae or perhaps Malvaceae I should be glad to publish them in the Flora. It isn't likely that another flora of the country will be published very soon, and naturally I should like to have this as complete as possible. It keeps growing with every new collection that comes in."

Nov. 7, 1937

"I have about finished a treatment of the melastomes for the *Flora of Costa Rica*, and probably shall have it ready in a week or two. I should like to ask you to give me some assistance with this group, if you possibly can. It is about the only family so far in which I haven't had the use of the material of my own collections.¹ If I send you the complete manuscript will you be kind enough to compare it casually with your herbarium?"

Dec. 8, 1937

"The Melastomaceae manuscript is ready to send you. I have about 200 pages more of manuscript for the flora, but

¹ On loan at the time to a specialist in the family.

don't care to turn in another part until I have about 500. When that will be I don't quite know, but probably not before next summer. It is probable that I shall be going to Guatemala some time next month. That, of course, will interrupt my work here. I don't care particularly whether I do go or not, but doubtless I shall enjoy it after I get there. I hope to take up the flora of Guatemala if I ever get Costa Rica out of the way, and one or two other things."¹

Jan. 3, 1938

"I have been making good progress lately with the flora, working on it about two days a week. As usual, I have been making the later parts somewhat fuller than the preceding ones, the species descriptions longer, and also the generic ones, and giving generic descriptions for even genera with a single species. I have included all species represented from the Changuinola Valley, Panama, for these certainly get into Costa Rica—the border is very close. Ditto for anything from the lower San Juan River, Nicaragua, but probably I have missed some of the latter.

"By the time your treatment of the Gesneriaceae is ready it can probably be published without any great delay. Just when they will be needed I can't really say. I am not going to Guatemala very soon as I had expected to do, so I may be able to get the *Flora of Costa Rica* finished within the next few months. It would take very little time to complete it if there were nothing else to do."

July 15, 1938

"The third part will be out by the end of this month. I have just finished reading the index, and most of it actually has been run on the press. In the Solanaceae you will be surprised to see something new, a new genus by Steyermark

¹ An example of Standley's amazing productivity at the height of his powers. Casually planning to do 300 pages of manuscript of a technical flora in six months, with time off for an extended field-trip! And the 300 pages were not only finished on time but ahead of schedule and published as part 3 of the *Flora of Costa Rica* July 29, 1938!

and myself. It is a curious plant that has been peddled about from place to place. I tried to get Moldenke to take it into the Verbenaceae, and offered to name it for him, but he turned it away from his door. I sent the material to Pennell, but he was out in the field. So we finally decided to place the plant in the Solanaceae, where it certainly doesn't fit well, but it doesn't fit any better anywhere else. I feel pretty sure it is a good new genus of something. I would have sent it to you,¹ but there wasn't time for sending the specimens out again if the genus was to appear in the flora anywhere near the place where it seems to belong."²

Re FLORA OF GUATEMALA

Aug. 2, 1939

"In Guatemala I had a highly successful trip, although rather too long a one. More than half the collection has been labelled, but it will be some time yet before the whole lot is ready for study. The Solanaceae are very numerous; I have duplicates of the better part of them for you. Ditto for Gesneriaceae, except that they are not numerous, except for *Kohleria*. In the Solanaceae there may be some new things. For the collection as a whole I do not believe the number of new species is great, but there are some very good ones.

"Steyermark is leaving around the middle of next month for Guatemala. He wants to stay six months. If all goes well,

¹ Because I was co-author of the Solanaceae, more by courtesy than anything else. I did go over the manuscript, make some additions, draw up some descriptions of new species, and write the key to *Solanum*, but most of the manuscript is by Standley. Perhaps a word of explanation is in order regarding the rather peculiar authorship attributed to the new species, e.g. *Solanum accrescens* Standl. & Morton, *S. celsum* Standl. & Morton, and so forth, but *S. Brenesii* Morton & Standl., *S. dotanum* Morton & Standl. and so forth, as though we couldn't decide which was the junior author. There was a reason, known only to us. It was Standley's fancy, and conviction, that the junior author always wrote the descriptions, and so when I wrote the description I was put down as the junior, and when he wrote it he was junior.

² The genus was *Valerioa* Standl. & Stey. but although the species was new the genus unfortunately was not. Dr. José Cuatrecasas has identified it with the excessively rare genus *Peltanthera* Benth. from Amazonian Peru, which is referred to the Loganiaceae, although there is still some doubt about the family reference since fruits are still unknown.

I may try to return there next year myself, although I think it might be more profitable for the flora if I should spend my time here and let someone else do the collecting.

"I was much disappointed in the Verapaz region of Guatemala. Like many other places it has been greatly overestimated. The people who have been enthused about it didn't know much about other regions of Guatemala. There are much better ones than Verapaz and the better ones have been but little worked. What did amaze me was the discovery in Verapaz of some abundant trees, conspicuous ones, that no one seems to have noted before. How von Tuerckheim could have overlooked them for so many years is hard to explain, but perhaps I have done the same thing myself with regard to other plants. One of the commonest shrubs over the greater part of Guatemala is *Amelanchier*, but I don't recall having seen a specimen from Central America. And so with a good many other common plants, not weeds."

June 19, 1940

"Steiermark turned up some remarkable things in Guatemala, some of the best new species to come out of Central America, and altogether unexpected genera, *Crumenaria*, for instance. Also he has a fine new genus of Rubiaceae, a showy plant with big pink flowers. By this time one would have supposed that the showy plants of Guatemala had been collected and named. Still, the most showy bromeliad that I collected, and in the Cobán region at that, proved to be new, and I believe a genus new to North America, so you can't always tell. Steiermark specialized on tree-ferns, and has what must be exceptionally fine and ample material of them. I am glad that I shall not have to collect any of them myself."

Sept. 13, 1944

"I now have ready to turn over to the printer the manuscript for a good-sized volume of the *Flora of Guatemala*. It is not properly the "first" volume, but begins with the Moraceae, and will be part 3 of the whole work, which probably will consist of six volumes. War conditions prevent publishing the "first" volume first, but that one is provided for neverthe-

less, as are all other parts of the whole work, so that it will not, unless something catastrophic interferes, ape the mode of appearance of the *Flora of Peru*.

"I had hoped to come to Washington before publication of the flora, to check up a few matters,¹ but they are very few and about most of them I am already fairly certain. I might get a few additional records there, in fact, I should be certain to get some, but I think the number can not be great, unless they should be new species, for we have about every possible species that could be expected from Guatemala and a good many that couldn't be. This first volume will end with the Connaraceae or perhaps the Caesalpinieae. I don't believe it will be possible to continue it through the Papilionatae. However, I want to be prepared for all possibilities and have the manuscript of that group written and ready for the printer, although I still have to add a few patches and gores in places here and there."

Mar. 13, 1945

"I could and perhaps shall write a volume on the Piperaceae of Guatemala—and other parts—although the genus is not so varied there as in Costa Rica. It is a mess. I have the genus *Piper* about finished. I have approximately 100 species and I have been rather liberal in the treatment. The number of really valid ones is probably somewhat smaller. The number that Trelease designated in our material is probably at least four times as many. As I have proceeded I have become rather bitter, not to say disgusted. In several cases there were mounted two sheets of some numbers, unintentionally perhaps, and in several instances Trelease marked each sheet

¹ The oft-expressed wish to visit Washington never came to anything; Standley never visited Washington again after leaving in 1928. It is characteristic that all Standley's work was done at a single institution, first in Washington and then in Chicago. He seldom if ever visited another herbarium and rarely borrowed specimens. This led to some omissions and errors that might have been avoided, but on the other hand doubtless expedited his work greatly. His motto was "Get it behind you," and this is essential to extensive accomplishments. If one is forever going back and reviewing and correcting and polishing, little can be done; the results will inevitably be small in quantity even though high in quality, and the latter is uncertain. Some botanical works that have been polished to a fare-thee-well are less accurate and correct than Standley's intuitive snap judgments.

as a new species, although you may be sure that I never gave a number to specimens taken from more than one shrub. When I wrote Trelease about it he replied that he was not surprised! I have done the best I could, but I can not monograph the whole genus, and only so could the status of some of the names be determined.

"From what I have seen of the mortality among the new species Trelease proposed from Guatemala, I suspect that not one quarter of his Panama and Costa Rican species can be valid. He paid no attention whatever to geographic distribution, which is sometimes at least suggestive in the case of Guatemalan species. Today I had occasion to write up a species of which we have one Guatemalan sheet, a very distinct species, labelled as new by Trelease. It is the same as a shrub found in Honduras, of which four collections have been made and named by Trelease as three new species and one variety (his varieties are the height of sarcasm I think, and added to give verisimilitude). All four were collected in the same spot, which I remember well (I made the first Central American collection of *Osmunda cinnamomea* in the same spot), and possibly from the same bush. The climax was reached when under one species I placed Guatemalan material that Trelease had referred to approximately 70 new species!"

May 25, 1945

"The Piperaceae have been taken care of by this time. You have doubtless heard of the possibility of Yuncker's taking up work on this family, Heaven help him! When the work is done carefully, I expect the synonymy will be stupendously monumental—the word monumental will apply accurately if used in its association with cemeteries."

Re THE BADIANUS MANUSCRIPT

June 5, 1940

"I had seen a reference to the publication of the Badianus manuscript but hadn't seen the book. Strangely enough, it came over to our library the same day that your letter about

it arrived. I don't believe one needs to look very closely at the publication to discover the errors. It is a beautiful piece of printing, so far as the ms. itself is concerned. But I trust the Johns Hopkins people are not going to adopt or return to the *materia medica* of that time. If the manuscript had been published just as it was found, with a translation, it would have been of interest sentimentally, but beyond that it has no value at all. I still have the volume on my desk and should like to write a review of it, but I don't know that it is worth while. It seems a waste of time to spend ammunition on anything of that sort, which will not fool any botanist. Of course, it is the sort of thing that the Garden Club ladies will rave about, God bless them, although I do not insist upon it."¹

Re REPRINTED LIST OF EL SALVADOR PLANTS

July 11, 1945

"One day last week I had the 'very unique' experience of receiving a copy of a publication of mine about which I had never heard before. It consists of 450 pages and is said to have been issued in 1941! It is a second edition of the list of Salvador plants "*extensamente corregida*" or something of the sort. Heaven help us! Have you seen it, and if you have a copy anywhere near, is there any indication of when it was received? I think it possible, after reading the introduction, that they did write me asking if I had any objections to their reprinting it, but if so it was a good many years ago and I had quite forgotten the matter. At any rate, I do not consider it improved, although I could have emended it considerably."

¹ A letter to Dr. Maxon dated Aug. 18, 1937, reads:

"Morton's visit I enjoyed more than anything that has happened in a long time. Unfortunately, so far as the *Badianus* manuscript was concerned, he didn't get any appreciable assistance from me, only sympathy, but that I think you can understand. I think it would be a very good thing if Dr. Emmart's remarks were cut to a minimum, if not suppressed altogether. I don't believe there is one drawing that I would be willing to state represented a certain plant. The manuscript should, it seems to me, stand on its own feet, if it has any, but then that is really none of my business."

The reference is to the fact that I was working with Dr. Emmart on identifying the plates of the manuscript and had taken the manuscript to Stanley for his help. I subsequently withdrew from the work.

Re FLORA OF HONDURAS

July 11, 1945

"I have some hope of going next year to Central America again, to get material for another flora. Much depends upon how the war goes, and especially on whether it is then possible to get gasoline and tires. I want to work along the west coast of the three central countries. The cream of Central America has been skimmed off with Guatemala and Costa Rica, but the other countries should provide a little that is different. The *Flora of Panama*¹ is an admirable publication, one that I like very much. But I should hate to get out a flora of a country whose vegetation is so little known. I doubt they have half the total number of species in the published flora. There are still a good many plants yet to be found in Costa Rica, but I rather believe the pickings from Guatemala will be rather slim in the future."

Aug. 12, 1950

"I am back in Honduras to stay, I hope, and it is doubtful if I shall ever see the States again. There certainly are plenty of things here to keep me busy, and as long as I am able to crawl around I can find plenty of field work in Central America that is worth while. In the States that would be difficult, for I am not vastly interested in new county records of even such important states as Missouri.

"There still is plenty to be found even in this vicinity, and during the past few weeks I have collected several undescribed species, besides others that are new to Honduras."

Jan. 9, 1953

"The Office of Agriculture of Honduras has asked me to prepare a flora of Honduras, which I hope to begin in the immediate future. It is not to be descriptive, but is to take up the families in order with some popular discussion of their important representatives. We don't have enough material to write a flora of the country similar to that of Guatemala,

¹ By Woodson and Schery.

nor do I see any immediate prospect of obtaining sufficient collections in the near future. At present it would have to be called 'A Flora of Honduras Based on Certain Selected and Frequently Visited Localities Easily Accessible by Automobile'."

Re THE NEW GRAY'S MANUAL

Nov. 20, 1951

"It was a great surprise to me when I received the copy of the new Gray's Manual that you were so kind as to send me. I can assure you that it is a gift I greatly appreciate. Naturally, I have found the book highly interesting in several different respects. You have to know Fernald and some recent botanical history to appreciate certain parts. It would be entertaining to make a list of those who are and are not mentioned in the Manual. I was none too happy to see his references to my work in Chenopodiaceae and Amaranthaceae, for some of my ideas that he adopts I should certainly alter now after so many years."

Re JOHN DONNELL SMITH

Dec. 18, 1953

"So far as I know, none of Captain Smith's correspondence ever reached the National Museum. I never saw any, and I was there when the herbarium and the books arrived. I wanted to prepare an account of his work, but never was able to obtain the necessary data, and so I never did anything beyond one or two brief obituary notices. There must be considerable correspondence extant at the Gray Herbarium, for he was a close friend of Sereno Watson, and was the only one, I believe, whom Watson named as a pall-bearer for his own funeral.

"Captain Smith was a reserved man, and probably never cared for publicity except in systematic work, but he was what in Spanish is called *amable* and *simpático*. I visited him several times in Baltimore and had lunch in his home on each occasion. If anyone is planning to publish a biographical sketch, I should be glad to supply what I still recollect. Prob-

ably I am about the only living systematist who had any personal contact with him.”

FINALE

Aug. 29, 1954

“It is raining here this afternoon, off and on, and delightfully cool, and also green, as long as the rains last. Our robins have left us or at least quit singing. For a long time they have been waking me at five in the morning. That is all right with me for I get up at five-thirty anyway. Flocks of meadowlarks have descended on us lately, migrants from the States, I suppose, for I think none are resident here. There is a wonderful crop of quail about here this season, different from those up north but with similar notes. Of course, we do have parrots and parakeets, but it is pleasant sometimes to see the northern birds, especially the robins with their beautiful song.”

Así Vi Yo a Standley

FAUSTINO MIRANDA

Sentado sobre cubierta al deslumbrante sol de los alisios observaba el corto “vuelo” de los peces voladores que volvían a sumergirse en las azules aguas del Atlántico dejando una pequeña estela. Habían comenzado a aparecer abundantes sargazos, juguetes pasivos de las corrientes marinas, pero todavía estaba lejos la costa americana de donde esas algas provienen. Hacía poco tiempo y parecía ya una eternidad, que había terminado en España la guerra del 36. Era el mes de junio y aun no existían signos de que se encendiera la guerra en el polvorín europeo. Todo parecía tranquilo en el mundo visto desde el medio del Atlántico. ¿Qué haría yo cuando llegara a México? Mi especialidad en la investigación botánica era el estudio de las algas marinas. Pero probablemente una vez en México tendría que volver a empezar; lo primero sería comer y después se vería. Mejor no pensar en eso. Volví a contemplar la inmensidad superficial del mar.

El tren interoceánico ascendía trabajosamente por el abrupto y accidentado declive oriental de la Mesa mexicana. Ya era de noche, y no obstante estar casi adormecido percibí las siluetas esbeltas de gráciles palmeras que formaban un verdadero bosque, espectáculo inusitado para mí. ¿Qué clase de palmas serían aquéllas? Después supe que estábamos cerca de Jalcomulco, Ver., y pasados varios años me enteré por *Trees and Shrubs of Mexico* de Standley que ésta era la localidad típica donde el danés Liebmann había colectado su *Brahea calcarea* hacía ya casi un siglo.

Para conocer algo acerca de las plantas del país adquirí en México el libro de Reiche *Flora Excursoria del Valle de México*. Era verdaderamente admirable esta flora mexicana, que ahora, por el mes de julio, se encontraba ya en todo su esplendor: salvias de enormes flores rojas, vistosos agraños arbóreos,

encinas o robles que no parecían encinas ni robles, pinos con las hojas lacias, fucias de flores diminutas, solanos de todos los jaeces, auténticas dalias no alteradas por el cultivo, etc., etc. Afortunadamente, había muchos géneros conocidos por mí de Europa en esta parte alta y templada de la Mesa mexicana donde está enclavado el pintoresco Valle de México.

Empecé a ganarme la vida dando clases de Biología en Colegios particulares. Un día hice una excursión a las tierras bajas y cálidas (“tierra caliente”) de Morelos y Guerrero; Cuernavaca, Cacahuamilpa. La impresión para un botánico europeo fue casi brutal. Con dificultad podía distinguir algunas familias de Fanerógamas; no pude reconocer casi ningún género. La *Flora Excursoria del Valle de México* no me servía ahora apenas para nada; y sin embargo, Cuernavaca se encontraba tan sólo a unos 80 kilómetros de la Ciudad de México.

Tratando de encontrar algo que me sacara del atolladero, frecuenté con ahinco las librerías de viejo de la ciudad; deseaba ardientemente conocer los nombres y propiedades de esos originales árboles tropicales, cuyas formas extrañas y vistosas admiré durante mi excursión a la tierra caliente. Algunas identificaciones entreví a través de los libros de Martínez, *Plantas útiles* y *Plantas medicinales de México*, y de Conzatti, *Flora sinóptica* y *Géneros vegetales mexicanos*, pero ésto, para clasificar árboles y otras plantas tropicales, era inadecuado o incompleto. Adquirí por entonces un ejemplar del *Genera Plantarum* de Endlicher, que por aquellos tiempos cumplía la venerable edad de un siglo, y venciendo toda clase de dificultades avancé un poco más en el estudio que me interesaba. Una tarde afortunada para mí, cansado de visitar librerías de viejo, entré en una más de la calle de Donceles. En unos viejos anaqueles, entre otros libros elegantemente encuadernados, se encontraban a la venta tres modestos tomos en rústica; se titulaban *Trees and Shrubs of Mexico* y su autor, según rezaba la portada, era Paul C. Standley. ¿Sería aquello lo que yo inconscientemente buscaba? Hojeé esos humildes volúmenes. . . ., y todavía hoy sigo hojeando diariamente las cinco partes de ese mismo libro, de ese venero inagotable de conocimientos acerca de las plantas mexicanas.

En efecto, poco después comencé a trabajar como investigador botánico en el Instituto de Biología de la Universidad de México y tuve necesidad de manejar cotidianamente la aludida obra. Tuve ocasión también de consultar las otras obras ya publicadas del mismo autor, y posteriormente hizo su aparación ese monumento, aun no concluído, que se titula *Flora of Guatemala*, realizado parcialmente en colaboración con el Dr. Steyermark, y hoy encomendada su continuación al Dr. Louis Williams.

Hay algo en un libro como *Trees and Shrubs of Mexico* que, a pesar del tiempo transcurrido desde su publicación, lo hace aparecer como una obra inmarcesible y no superada por obras ulteriores de índole semejante. Esto se debe a diversas razones, dos de las cuales son bastante obvias. En primer lugar, ese libro trataba de un modo relativamente completo de la portentosa y original flora mexicana, y en segundo lugar, incluía muchos de los extraordinarios conocimientos y tradiciones de los indígenas mexicanos acerca de esa flora maravillosa. Es natural que en libros posteriores dedicados al estudio de floras tropicales americanas se repitan las mismas plantas o se repitan los viejos conocimientos y tradiciones sobre ellas ya presentados adecuadamente en *Trees and Shrubs*. . . .

Pensaba en todas esas cosas y en que probablemente pronto iba a conocer al autor de esa obra notable, cuando miré por la ventanilla. El autobús corría velozmente por la recta carretera. Iba casi vacío en esa Navidad de 1947. Los únicos pasajeros éramos un joven mexicano que iba a estudiar ingeniería eléctrica, una mujer de raza negra que, alegre en ese día festivo, hablaba sin cesar sin que nadie se ocupara de saber lo que decía, y yo. Afuera soplaba un inexorable viento frío que transportaba casi horizontales los copos de nieve. Yo deseaba asistir a las reuniones de la "AAAS" que se celebrarían aquellos días de final de año en Chicago, y nos estábamos acercando a esa ciudad.

Caminaba en la mañana por la Avenida Michigan, luchando denodadamente contra un viento recio y helado que soplaba del lado del lago. Me acercaba a la enorme mole del Museo de Chicago que alza en una abierta explanada sus rasgos heleno romanos, como otros muchos edificios construí-

dos durante el súbito surgimiento de la nación norteamericana. Se me antojaba que hombres como Standley eran la clave para explicar la posibilidad de ese repentino y casi explosivo desarrollo de una nación. Me imaginaba la inteligencia y energía, medidas en cantidad y calidad de conocimientos acumulados, y la capacidad de dirección y organización necesarias para escribir un libro como *Trees and Shrubs of Mexico*.

Pero . . . ya estaba en el interior del Museo y había saludado a mi antiguo amigo Cuatrecasas, que me presentó a varios botánicos destacados. Nos acercamos a un hombre bajo, delgado y afable que conversaba animadamente con otras personas. Me presentó a Standley, el cual con desembarazada volubilidad comenzó a hablarnos en correcto español. Como si nos hubiéramos conocido de siempre, me contó rápidamente varias anécdotas, de las innumerables que al parecer recordaba acerca de sus expediciones por Centroamérica. No hacía gala de ello, pero por los detalles que incluía en sus relatos podía colegirse que poseía una prodigiosa memoria. También campeaba en su conversación un sincero cariño por los pequeños países centroamericanos. Era tan desbordante su personalidad que apenas pude musitar unas cuantas palabras durante la charla. No lo he vuelto a ver desde entonces y ya no lo veré más.

Así conocí yo a Standley. Resultaba para mí en efecto un representante legítimo de esas generaciones de hombres enérgicos que hicieron posible el actual encumbramiento de los Estados Unidos. Al parecer su filosofía se fundaba en la razón y la colaboración, y su estilo era la acción rápida y eficiente.

Man in a Hurry

LYMAN B. SMITH

One of the first of many legends that I heard about Paul C. Standley was that he moved about the herbarium at such a furious pace that his coat-tails always stood straight out behind him. Admitting that this is a bit of a strain on one's credulity, he still must have had almost incredible stamina and determination to accomplish what he did in one lifetime.

From Mexico to Panama he collected so voluminously that his serial numbers reached one hundred thousand and he started over again. Anyone studying this area in the United States National Herbarium or Chicago Natural History Museum soon finds Standley collections taking the lime-light. However, this is not by reason of sheer numbers. The specimens are well prepared and there is no discrimination against difficult subjects like cacti or bromeliads. When Standley collected it was always with a view to writing a flora and he tried to obtain as large a representation of species as possible.

His floras, like his collecting, were pursued with relentless vigor and singleness of purpose. How else could he have produced all he did, culminating with the *Trees and Shrubs of Mexico*, that alone exceeded the lifetime achievement of most botanists? It is perhaps significant of the quality of this book that it has recently been reprinted without revision.

Let us admit that he wrote his floras in a hurry and in so doing made errors. Yet these floras are still outstanding to the botanist whose principal job is identification and the errors are proportionately no more numerous than those of his more perfectionist and less productive colleagues.

With all this he still found time for monographic work in such large and difficult families as the Amarantaceae, Nyctaginaceae, and Rubiaceae.

Thus, in spite of a minimum of personal acquaintance with Standley, his works are so familiar that he seems to have been with me constantly for a lifetime.

Paul C. Standley
Amigo Sincero de Honduras

ANTONIO MOLINA R.

Entre los grandes naturalistas que han trabajado en el estudio de la flora de América Central se destaca la figura insigne del botánico americano, Dr. Paul C. Standley, nació este el 21 de marzo del año 1884 en Avalon, estado de Missouri, siendo sus padres Ingram Calvin y Florence (Carpenter) Standley. Estudió en el Drury College, Springfield, Missouri, durante los años 1903 a 1906; obtuvo su B. S. en New Mexico State College en el año 1907, y su M. S. en la misma universidad un año después. El nunca se casó. Fué botánico asistente del New Mexico State College durante los años 1907 a 1909; asistente y curador asociado de la división de plantas vasculares del United States National Museum en Washington durante los años 1909 hasta 1928; curador asociado del herbario del Field Museum of Natural History en Chicago desde 1928 hasta 1936, y curador de este de 1937 hasta su retiro en 1950. Fué curador asociado del herbario de la Escuela Agrícola Panamericana en Honduras desde 1947 hasta 1957, y después botánico emérito de la misma. Es autor de las obras siguientes: *Flora de Nuevo Mexico*, 1915; *Flora del Distrito de Columbia*, 1919; *Arboles y Arbustos de México*, 1920 a 1926; *Plantas del Glacier National Park*, 1927; *Flora de la Zona del Canal de Panamá*, 1928; *Flora de Yucatán*, 1930; *Flora del Valle de Lantilla, Honduras*, 1931; *Los Bosques y Flora de Honduras Británica*, 1936; *Flora de Costa Rica*, 1937-1938; *Flora de Guatemala*, 1946-, de la cual se han publicado varios tomos y otros en preparación que serán publicados oportunamente por el Chicago Natural History Museum. También Standley escribió cientos de artículos, revisiones y monografías que se publicaron en muchas revistas y boletines científicos. Realizó viajes bo-

tánicos por la parte occidental de los Estados Unidos de Norteamérica, México, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica y Panamá.

El Dr. Standley hizo de Honduras su segunda patria, donde llegó por primera vez allá por el año de 1927. Siendo en aquel entonces miembro del personal científico del U. S. National Museum de Washington. Con la valiosa cooperación de Mr. Victor M. Cutter, presidente de la United Fruit Co., y de Mr. Wilson Popenoe, director de la Estación Experimental de Lancetilla, se hicieron posibles sus exploraciones, estudios, investigaciones y recolecciones de especímenes de una parte del litoral norte de la república de Honduras.

Standley a su llegada a Honduras se estableció en el pequeño valle de Lancetilla en el departamento de Atlántida, donde construyó su propio campamento en la selva densa y lluviosa de la montaña de Lancetilla a unos 3 kilómetros de la casa de huéspedes de la Estación Experimental de Lancetilla. Desde este campamento día a día hacía recorridos a todo lo largo y ancho de la montaña y del valle, sacando valiosas colecciones de plantas y sobre todo de aquellos especímenes raros para agregarlos a la enorme flora del mundo. Una vez estudiados, clasificados y herborizados, estos formaron la base de una contribución extraordinaria al conocimiento de nuestra flora hasta entonces botánicamente casi desconocida. Esto sería así de no haber sido por la paciencia y trabajo incansable realizado por el Dr. Standley y en especial por su gran obra científica *Flora of the Lancetilla Valley, Honduras*, publicada por el Field Museum of Natural History en el año 1931. Así como también sus varios escritos científicos sobre plantas nuevas de la serie "Plantae Centrali-Americae" publicadas en la revista *Ceiba*, editada por la Escuela Agrícola Panamericana.

Después de una larga ausencia, el Dr. Standley volvió a Honduras en 1946 por invitación personal de Wilson Popenoe, entonces director de la Escuela Agrícola Panamericana situada en el hermoso Valle del Río Yeguaré hoy conocido más por el nombre de Valle de "El Zamorano." Aquí el Dr. Standley se encontró con otro botánico, el Dr. Louis O. Williams, quién tenía a su cargo el establecimiento del herbario y biblioteca científica de la Escuela Agrícola Panamericana;

siendo yo a su vez su asistente y curador. Este herbario había sido iniciado en 1943 con las colecciones locales del profesor Juvenal Valerio Rodríguez de nacionalidad costarricense, buen amigo, colaborador y también antiguo acompañante de Dr. Standley en muchos de sus viajes de exploración y recolección en Costa Rica para la flora del mismo nombre.

El Dr. Standley con sus propias colecciones realizó una gran contribución a la ampliación y enriquecimiento de lo que hoy en día es el herbario de la Escuela Agrícola Panamericana, considerado en la actualidad el más completo que existe en América Central. El cual cuenta con más de 90,000 especímenes clasificados, identificados y archivados en sus respectivos gabinetes de acero.

Nadie hasta el presente conoció tantos detalles de nuestra flora, como el Dr. Standley, conociendo las plantas ya por sus propios nombres científicos, vulgares o indígenas; así como también de sus propiedades económicas, médicas y venenosas. También cabe hacer mención de las muchas regiones o lugares que este sabio ilustre visitó en su gran afán de descubrir y extraer los tesoros vegetales que nuestras montañas, valles y selvas poseían. En sus cientos de viajes de exploración, estudio y recolección de material botánico, el Dr. Standley visitó 13 de los 18 departamentos que componen nuestra república. En la mayoría de estos viajes logró conocer y familiarizarse con muchas de las costumbres, modismos y maneras de las gentes de las ciudades, pueblos, aldeas y caseríos que visitaba. En su manera de ser el Dr. Standley nunca fué orgulloso ni vanidoso, es decir que siempre trató muy de cerca a la gente humilde a las que repetidas veces ayudó en sus dificultades, ya por medio de consejos sanos y oportunos, así como también de otras maneras. Cualidades estas que han dejado gratos recuerdos en aquellas personas que tuvimos la suerte de conocerlo y tratarlo personalmente.

Además de sus innumerables viajes botánicos realizados en Honduras en sus últimos años también llevó acabo algunos a las repúblicas de El Salvador y Nicaragua. Regresando siempre a su cuartel general que fué la Escuela Agrícola Panamericana, en la cual hacía los últimos arreglos del material adquirido en los diferentes lugares de los países mencionados,

para luego mandarlos al Chicago Natural History Museum del cual formaba parte como miembro del staff científico.

En 1947 el Dr. Standley regresó a Chicago, donde vivió y trabajó la mayor parte de su vida científica. Al final de 1948 volvió a Honduras, esta vez con caracter permanente, estableciéndose en la Escuela Agrícola Panamericana, como curador y botánico asociado. Durante estos años realizó una labor importante, trabajando en el herbario y en la ordenación y clasificación de los muchos libros que llegaban casi diariamente a nuestra creciente biblioteca científica.

A su retiro de la Escuela Agrícola Panamericana en 1957 el Dr. Standley se radicó en Tegucigalpa, donde hasta la muerte hizo una vida tranquila, alejado completamente de toda actividad botánica, entregado completamente a la lectura de libros y revistas que adquiría en la ciudad los días que baja a ella. Aprovechando estas ocasiones para ver a algunos de los antiguos amigos de la Escuela Agrícola Panamericana, lo cual le servía de gran estímulo. En sus últimos años, por los setenta, se mantuvo en gran forma y estos pudieron haber sido empleados en beneficio de las ciencias botánicas en vez de esa soledad a que estuvo sometido en su retiro en Viera.

El 27 de abril de 1961 Standley fué condecorado con la orden del "Quetzal" en el grado de gran comendador de la república de Guatemala, en honor a su gran labor en las ciencias botánicas. Patentizada hoy en lo que se conoce en el mundo científico con el nombre de "Flora of Guatemala." Se encuentran depositadas en el herbario del Chicago Natural History Museum la mayor parte de las plantas vasculares recogidas en América Central y que en su mayoría fueron colectadas por Standley através de sus viajes en su infatigable misión de encontrar plantas raras para darlas a conocer al mundo botánico.

My Debt to Paul C. Standley

ROBERT E. WOODSON, JR.

The first time I met Paul C. Standley, I was a graduate student at the Gray Herbarium of Harvard, where I had been sent by Professor G. T. Moore, of the Missouri Botanical Garden and Washington University, as a native product of the St. Louis schools in need of "broadening." At Harvard I came briefly under the spell of Oakes Ames, M. L. Fernald, E. C. Jeffrey, B. L. Robinson, and C. A. Weatherby. When my new teacher, Professor Robinson, learned that I had taken a through train from St. Louis to Boston, he decreed that henceforth I should make contacts with botanists at New York, Philadelphia, and Washington *en route*, and so I did; that is how I came to know (among others) N. L. Britton, J. K. Small, P. A. Rydberg, Percy Wilson, F. W. Pennell, W. R. Maxon, F. V. Coville, E. P. Killip, T. H. Kearney, and—far from least—P. C. Standley. I learned that no university campus is sufficient unto itself (even Harvard). Jet air transportation notwithstanding, my advice to an advanced student in botany (or perhaps any other subject) is to take a relatively slow and circuitous itinerary, making as many stops as possible between points of departure and destination in order to observe the local *dramatis personae*.

Perhaps none of these great figures in American botany was to influence me more profoundly than Standley. We have remained friends since the first day, in spite of the fact that I have not seen him, nor even had the pleasure of a letter, for a number of years. Of the other figures that I was privileged to meet in those formative days, I cannot avoid comparing Standley and Fernald most closely, although I am sure that both would have resented the association. Both were inveterate field men, both completely dedicated to

the pursuit of systematic botany (or taxonomy, if one chooses), both physically and mentally indefatigable and prodigious authors, both audaciously keen of eye and wit; an hour spent with either would provide a year's supply of lively anecdotes. Both were inspiring in their ambition. But there also were contrasts: Fernald, after a reluctant fling with Edward Palmer's Mexican plants under the urging of Robinson, devoted the remainder of his life to the vegetation of his native New England and the Maritime Provinces; Standley, after an affectionate introduction to the botany of his native Missouri Ozarks, was to become the most useful, if not the undisputed, authority of his day on the vegetation of Mexico and Central America.

While Fernald published and recited his tales indiscriminately, Standley for the most part reserved his for his friends; Fernald's descriptive prose is cluttered with more or less amusing irrelevancies, while the introductions to Standley's floras are little masterpieces which, though objective, can scarcely fail to capture the imagination of any one who reads them. Although less precise in his science, Standley had greater personal warmth; his interest in the many lands which he travelled embraced not only their plants but their people.

Standley's several tropical American floras were the inspiration for my own *Flora of Panama*, which was conceived under the flimsy pretext of the maintenance by the Missouri Botanical Garden of a small establishment in the Canal Zone. It was to Standley that I first confided my vocation, and it was with a copy of his *Flora of the Panama Canal Zone* that I set out upon my first collecting trip in 1935.

He gave me every assistance, including his extensive card index of references to the Panamanian vegetation, which I still use; he identified hundreds of the most difficult specimens for me, particularly when sterile or in enigmatic fruit. This was no special favor for me alone; I don't suppose that he, himself, knew how many thousands of specimens he unflinchingly identified for others during his many years at the United States National Herbarium and Chicago Natural History Museum. In the disclosure of the floristic and ethnobotanical wealth of Central America he combined, almost single-handed,

the roles of Gray, Torrey, and Engelmänn in the early eighteenth century exploration of the western United States. In spite of the inevitable hasty misjudgments, he was truly magnificent.

In addition to his encyclopedic knowledge of plants, Standley was a deft and penetrating wit, and both qualities could be combined for good or ill as the occasion might require. Back in 1936 I happened to be in Chicago during the heat of the presidential campaign and, during lunch, I asked Standley what were his political preferences. "Just yesterday," he remarked casually, "I did my best for the Republicans." It developed that he had had a visit from a Republican functionary who was in charge of publicity for the campaign of Governor Alf M. Landon of Kansas, the "Sunflower State."

"Doctor Standley," the man explained, "we would like you to give us some facts of general interest about the sunflower which we may use for the support of Governor Landon." "Surely," agreed Standley briskly. "The sunflower is an obnoxious weed; it impoverishes the soil upon which it grows." The man cleared his throat and smiled uneasily. "We'll skip that one, Doctor," he said. "Can you think of some way in which the sunflower might be regarded as a symbol of America's position in world affairs?" "Yes," Standley conceded, "sunflower seeds are the favorite light snack of the Russians." "Oh, no," the man moaned, "try again—possibly something of a parallel of the sunflower and the American people . . ." "Surely," Standley resumed, "the sunflower is a natural hybrid of uncertain parentage." "Doctor Standley," the sweating man exploded, "can't you say anything *good* about the sunflower?" "I'm afraid not," was the smug reply. "You see, I'm a Democrat."



BOTANISTS AT THE INTERNATIONAL CONGRESS OF PLANT SCIENTISTS, ITHACA, NEW YORK, 1926

Left to right, Back row: STANDLEY, Bacigalupi, Payson, Manning, Smith, Torrey, Warner, Fuller, St. John, Darlington, DeFrance.
Second row: Wu, Fogg, Rydberg, Gates, Barnhart, Nelson, Johnson, Pennell, Van Eseltine, Davidson, Turner, Young, Blake, Fernald.
Third row: Sherff, Schear, Arthur, Gleason, Ehlers, Dorn, Robinson, Greenman, Jepson, Rehder, Howe, Johnston, Hall, Abrams.
Front row: Hazen, Sprague, Hitchcock, Hill, Briquet, Wettstein, Osterfeld, Berger, Bailey, Erlanson, Kibbe, Rendle, Jurica, Gunderson.

Elogio del Dr. Paul C. Standley

ARMANDO DUGAND

Nunca he tenido la ocasión, siempre muy deseada por mí, de tratar en persona al doctor Paul C. Standley, no obstante que por espacio de treinta años me ha favorecido muchas veces con su amistosa ayuda profesional, que recuerdo con gratitud especial; fue él por cierto uno de los que—quizás sin saberlo—fomentaron la afición botánica que anidaba en mi espíritu desde niño, hasta convertirla en vocación apasionada e irresistible. Importa anotar que tal evolución se produjo a pesar de que mis relaciones con este ilustre hombre de ciencia no sólo fueron distantes geográficamente, sino casi siempre indirectas, pues se efectuaron generalmente por conducto de un tercero: en este caso, el distinguido especialista en anatomía de maderas tropicales, Profesor Samuel James Record, de grata recordación, director que era entonces de la Escuela de Selvicultura de la Universidad de Yale.

Ello ocurría en los años de 1932 a 1938, cuando el doctor Standley ejercía activamente su profesión de perito botánico en el Museo de Historia Natural de Chicago y había conquistado ya el puesto eximio que ocupa en el mundo científico, por sus amplios conocimientos de la flora neotropical, que tantas veces han quedado plasmados en obras sistemáticas de gran valor. Acostumbraba entonces el profesor Record someter al dictamen de Standley la determinación de los ejemplares de herbario que yo acompañaba, para atestar o certificar así su identidad botánica, a las numerosas muestras de madera que recogí por aquel tiempo con destino a la colección xilológica de Yale, casi todas representativas de las formaciones subxerofíticas y tropofíticas que caracterizan a la vegetación de la costa colombiana del Mar Caribe. Y

Standley, en sus respuestas a Record—que éste me transcribía anotándolas con sus propios comentarios personales—al dar los nombres científicos de mis plantas solía añadir notas dirigidas tanto a Record como a mí, ora señalando puntos de duda o de interés botánico especial, ora manifestando el deseo de que consiguiera mejores ejemplares de tal especie o cual otra, ora haciendo observaciones taxonómicas y nomenclaturales concisas, que para mí—simple aprendiz—eran instructivas en grado sumo.

Entre las muchas plantas que coleccioné en aquella época resultaron algunas que al parecer eran especies nuevas para la ciencia, y que Standley describió técnicamente en la revista periódica *Tropical Woods*, de la Escuela de Selvicultura de Yale, o en sus *Studies of American Plants* que aparecían, también periódicamente, en las Series Botánicas del Museo Field; y aunque algunos de los epítetos que él impuso en tales ocasiones han pasado desde entonces a la sinonimia de otros *taxa* que ya habían sido denominados legítimamente con prioridad, los demás han tenido validez estable hasta nuestros días. En todo caso, aquellos lo mismo que éstos constituyen para mí recordativos muy gratos de una colaboración amistosa, placentera y eficaz entre tres personas que perseguían separadamente—cada una en su medio y en su ramo—un objetivo de interés científico, distinto en la forma pero común en el fondo.

Me complace tener ahora la oportunidad de reconocer públicamente, como lo hago aquí con toda sinceridad, que mi vocación entrañable a la *scientia amabilis* recibió desde sus primeros pasos la ayuda pronta y el estímulo alentador, el ejemplo inspirante, el consejo oportuno y la crítica justa que me brindaron siempre de manera diligente, puntual y agradablemente sencilla, sin vanas ampulósidades, cuatro de los botánicos más eminentes de este siglo: Samuel J. Record, Paul C. Standley, Henry Pittier y Ellsworth P. Killip. Los menciono en tal orden, considerándolos no por su importancia relativa en la jerarquía de la Ciencia, sino por la precedencia cronológica que tuvieron en la evolución de mis propios estudios.

A ellos, por su ayuda personal y por la que he sacado de sus obras publicadas, debo el meollo de lo poco o mucho que

he aprendido en mis actividades botánicas de treinta años. A todos ellos he conocido en persona, con excepción de Standley, lo cual no aminora de ningún modo la influencia benéfica que tuvo éste en la profesión que ejerzo; al contrario, es más notable por cuanto la persona en que tal influjo tuvo efecto se hallaba separada y distante, y el medio de comunicación era indirecto, como dije al comienzo.

El doctor Louis O. Williams, quien hoy reemplaza dignamente al doctor Paul C. Standley en el Museo de Historia Natural de Chicago, me ha pedido muy gentilmente que escriba una apreciación del gran botánico en relación con mis estudios sobre la flora de Colombia. Creo haberlo hecho aquí en forma objetiva y sincera. Sean estas líneas el testimonio vivo de mi admiración y aprecio muy grandes por el veterano botánico, cuyo nombre insigne—como el de Mutis elogiado por Linneo en histórica frase—*nulla aetas umquam delebit*.

Paul C. Standley

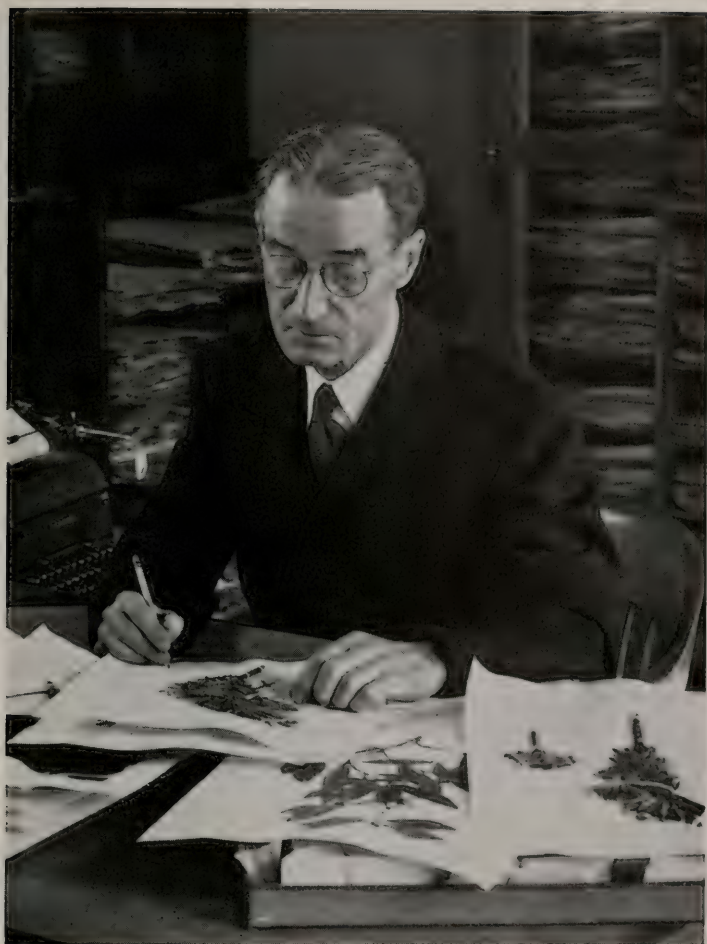
CLIFFORD C. GREGG

My acquaintance with Paul Carpenter Standley dates from the spring of 1928 when he came to Field Museum of Natural History in the capacity of Associate Curator of the Herbarium. Subsequently, I learned that he was born in Avalon, Missouri, on March 21, 1884, and after studying three years at Drury College in his native state, he transferred to New Mexico State College, where he received both a Bachelor of Science and a Master of Science Degree. His employment history included three years at New Mexico State College and twenty years at the United States National Museum in Washington before coming to his new assignment in Chicago.

He entered upon his new duties with a minimum of confusion, and was hard at work in the Herbarium almost from the moment of arrival. He was an indefatigable worker—always in the Herbarium with his plants or busy at his typewriter. Nor do I recall ever seeing him in his office without a cigarette.

During his time at the Museum, he added greatly to the collections and was a prodigious writer of both popular and scientific publications. His publications for the Museum include studies on plants from Yucatan, Honduras, Costa Rica, British Honduras, Peru, Guatemala, and the Chicago area. At times his production was so voluminous as to bring complaints from the Museum's Division of Printing and Publications.

Much of the rapidity with which he worked can be attributed to his thorough knowledge of his field. Specimens which might demand considerable study on the part of some botanists, would be instantly recognized as "old friends" by Standley. I recall an occasion when a friend of mine, a prominent



Photograph by Huron H. Smith

STANDLEY ABOUT 1940
At Field Museum of Natural History

publisher, came to my office with a single specimen of grass. He asked whether we had anyone on the staff who could tell him what it was. I was certain that we had, and together we went to see Paul Standley. Standley glanced at the specimen and asked where it had been obtained. Immediately, my friend protested that if he had to give all the information

about it, almost any botanist could name it for him. Standley's answer was quick and to the point: "It isn't necessary that I know where it is from. I can identify it definitely, but a knowledge of its habitat might make it a little quicker. It appears to be a specimen of a grass that is quite common on the Yucatan Peninsula." My friend was amazed! He had just returned from a vacation trip to Yucatan. Thereafter, he never questioned the ability of any member of the Museum staff to handle any identification problem, no matter how difficult.

During his years at the Museum, Paul Standley occupied the offices which had been designed for the Chief Curator of Botany. However, Dr. B. E. Dahlgren, then Chief Curator, preferred to work elsewhere and Standley was provided with adequate space for his voluminous studies. Almost daily, Dahlgren and Standley would leave the Museum together at lunch time, walking across Grant Park and returning together a little later. It is a well-remembered sight among the old-timers at the Museum, as Paul Standley, being small of stature, was required to take many hurried steps to keep pace with his taller companion.

Standley was a man of decision and could not easily be swayed when he had made up his mind. At times, his letters to Museum correspondents required judicious editing in order that friendly relations between institutions might be maintained.

Museum collections increased greatly under his administration, both as Associate Curator and later as Curator of the Herbarium—not only because of his own effective collecting, but because of the collections that were attracted to Chicago Natural History Museum because he was on our staff. A never-ending stream of plants came to the Museum for his identification.

After his retirement from the Museum in 1950, he continued to be carried on the staff as Curator Emeritus during the next five years. Of course, his own desire to live in his beloved Central America expressed itself immediately on his retirement, and he made his home in Tegucigalpa for many years.

He will ever be recalled at the Museum as a most dynamic and efficient Curator, equally happy at collecting specimens or studying them, and driving himself to efforts far beyond the call of duty.

Botánicos de Antaño—Paul C. Standley

OTON JIMENEZ

Conocí a Paul C. Standley en el verano de 1919, cuando visité Washington por vez primera. Le fuí presentado por el Dr. Henry Pittier, al servicio entonces del United States Department of Agriculture. ¡La figura de Pittier me era familiar, pues lo conocí desde niño, siendo vecino y buen amigo de mi padre, en San Francisco de Guadalupe! ¡Cuántas veces lo confundí con mi padre al irlo a encontrar, cuando de lejos aparecía, ya que ambos vestían trajes oscuros, usaban bombín y se dejaban crecer su barba negra! Muy gratos recuerdos guardo de su cariñosa acogida, acompañándome hasta mi casa, disimulando mis frecuentes equivocaciones.

La oficina de Standley, que también era la de William R. Maxon, quedaba en el viejo edificio del Smithsonian Institution, frente a la del Dr. Albert S. Hitchcock y de su eminente colaboradora Dra. Agnes Chase, como apéndices del salón donde se conserva el Herbario del United States National Museum, uno de los más ricos en plantas de nuestra América. Pittier, tan parco en elogios, se expresó con gran vehemencia y entusiasmo del “machito” ó “gringuito” de poca estatura, de apariencia tímida y triste, pero de mirada viva, penetrante e inteligente. Conversamos en español, idioma que ya dominaba gramaticalmente y que pronunciaba bastante bien.

Ese día conversamos poco. Pittier se refirió al material enviado por mí de la bellísima Malvacea *Wercklea insignis* Standley—dedicada a honrar justificadamente al infortunado botánico alemán D. Carlos Wercklé—material que llegó tardíamente, habiéndose descrito el género y especie con el muy incompleto y deteriorado enviado por su descubridor. Me manifestó también que en breve partiría para Venezuela y que Standley continuaría el estudio y descripción de los ejem-

plares del género *Ficus* de Centro América, entre los cuales figuraban especies nuevas y de mucho interes. Maxon, el hombre de los helechos, sacó un cartapacio de un cajón y muy sonriente me preguntó: “¿Lo reconoce?” ¡Claro! Era la rarísima especie *Hemionitis Otonis*, Maxon, que para mi tenía el mérito de ser mi primer hallazgo de una especie nueva, cuando todavía era un gamín de pantalón corto, media larga y gorra marinera, recién ingresado a la enseñanza secundaria. “Bueno, consiga mas ejemplares,” me dijo. Lamentablemente nadie ha vuelto a encontrar esta especie, cuya localidad tipo fué el Brasil de Santa Ana, a orillas del Rio Virilla.

Ese mismo día y en el mismo lugar conocí a Wilson Popehoe. Se presentó de improviso y curioso y sonriente, con su cara de chiquillo travieso que conserva todavía a pesar de que “los años le volvieron de plata las hebras que antes fueran de oro,” preguntó: “¿Está Otón Jiménez aquí?” Su deseo de conocerme personalmente se basaba en el interes de visitar Costa Rica para investigar las formas primitivas de aguacates y otras especies del género *Persea*, de las que Pittier le había hablado. Grata y honrosa fué para mí esta oportunidad de iniciar una amistad perdurable, acrecentada al correr del tiempo. Nuestros proyectos y esperanzas, comentados en aquella gratísima temporada, se realizaron cumplidamente al encontrar, en las montañas que entonces existían entre San Isidro de Coronado y San Jerónimo de Moravia, el “aguacate de anís,” una de las probables formas ancestrales de esta valiosa fruta.

Pittier confesó siempre su admiración por Standley, a quien consideró como uno de los botánicos mas sabios, laboriosos y perspicaces de su época, no sólo en trabajo de gabinete, sino también como observador sagaz e infatigable colector en el campo. La mayor parte de los estudios iniciados por aquél al trasladarse a Venezuela—en donde tendría oportunidad de realizar una labor monumental—fueron encomendados a Standley, seguro de que quedaban en manos capaces y diligentes que les darían buen término. “Se perderá de vista,” me expresó en alguna de las varias oportunidades que tuve entonces de disfrutar su compañía en sabrosas conversaciones, en las que recordó siempre su vida en Costa Rica, llena de

dulzuras y de amarguras también. “Mucho puede esperarse de elemento tan capaz y tan joven.” Standley tendría entonces unos 30 años. Como puede juzgarse, Pittier resultó buen profeta.

Al través de los cuarenta años transcurridos mantuve activa correspondencia con él y con gran cariño conservo sus cartas llenas de información botánica, entremezclada con consideraciones filosóficas, de política internacional, filatelia y de datos personales sobre los numerosos amigos y corresponsales, unidos por nuestro común interés en plantas. A pesar de su dominio del español, con frecuencia escribía en inglés. En 1922, trabajando la *Flora de El Salvador*, me escribió: “I have been enjoying my work here very much. All the people, from the President to the lowest of the descalzos have been so kind and have aided me in every way possible. This country is a beautiful one but not a very good one for a botanist. There is too much coffee. Even to the tops of the highest volcanoes (they are not very high) you find cafetales and no virgin forests. I should enjoy seeing some of the forests that you have in Costa Rica. Nothing would please me more than to come to Costa Rica, for even here the Salvadoreans say that it is the finest part of Central America. But I am sorry that I shall not be able to come this year.”

Efectivamente, no fué sino hasta en 1924 que pudo anunciar su proyectada visita a nuestra tierra. Don Napoleón Quesada, mi muy recordado y querido Profesor de gramática y literatura española, era por entonces el Ministro de Educación Pública. Se me ocurrió un día visitarlo en solicitud de un permiso para que Juvenal Valerio Rodríguez, Director de la Escuela de Tilarán, pudiera acompañar a Standley en sus exploraciones. Le hablé de la preparación y entusiasmo que Valerio tenía por los estudios botánicos y del enorme servicio que al país podría hacérsele dándole una oportunidad de colaborar con un naturalista de tanto mérito. Confieso con orgullo que no me equivoqué. Don Napoleón no sólo concedió gustosamente el permiso solicitado, dándole además la generosa cooperación del Ministerio, sino también mi modesta gestión contribuyó para dotar a mi patria de un hombre de ciencia de los quilates de Juvenal. En una carta del año 1926,

Standley me escribe: "Tengo grandes esperanzas en lo que va a coleccionar Valerio en el Guanacaste. El sabe ahora como hacer colecciones y cuando ha salido solo, ha logrado las colecciones mas grandes que hubiera traído cualquier botánico que yo conozca." De tal maestro tal discípulo.

Tuve el privilegio de acompañar, aunque en modesta escala dado el poco tiempo que me dejaban las obligaciones en la empresa de mi familia, a Standley en algunas exploraciones realizadas ese año y un año mas tarde, cuando nos visitó por segunda vez. Hicimos un viaje al Volcán Poas con las familias del Profesor Don Anastasio Alfaro y de Don José C. Zeledón y a otros lugares como a La Palma, el Bajo de la Hondura, etc. Me maravilló la sutileza de su espíritu de observación para identificar determinada especie entre muchas, su ilimitada erudición y feliz memoria, tanto como su entusiasmo, la resistencia a la fatiga y despreocupación por la inclemencia del tiempo, los caminos frágiles, la inhospitalidad de las viviendas o la pobre calidad o cantidad de las comidas. Nada entorpecía su tarea cuando colectaba, fuera de los pocos segundos que necesitaba para encender un nuevo cigarrillo en la colilla del viejo. Tal actividad, coraje y devoción a su tarea jamas los observé en ninguno de los tantos naturalistas que el Destino y mi buena fortuna me han deparado conocer y tratar personalmente.

La labor realizada por Paul C. Standley en Costa Rica no tiene paralelo. Como explica en el Prólogo de su monumental *Flora of Costa Rica*, publicada en 1937-38 por el Field Museum of Natural History, de Chicago, en sus dos visitas recogió mas de quince mil ejemplares de plantas, vale decir, casi otro tanto de lo que hasta la fecha habían colectado todos los botánicos al servicio del país. "It is improbable that in any part of the earth there can be found an equal area of greater botanical interest" exclama, con sin igual elocuencia, en la misma obra. Quedan para plumas mas autorizadas los comentarios sobre este extremo, siendo el propósito de las presentes líneas expresar mis personales impresiones sobre las facetas humanas de este eminente hombre de ciencia.

Su caracter suave y afable, a pesar de su apariencia huraña, a veces triste y tímida, le valieron la simpatía y aprecio de

cuantos lo conocieron y trataron. Aquí, como en El Salvador y en todas partes, desde los grandes hasta el humilde peón de pie en el suelo, le brindaron la mas sincera amistad y decidida cooperación en su trabajo, aun cuando no siempre unos y otros comprendieron su importancia o su valor. En Abril de 1926, al regresar de su segunda visita a nuestro país, me escribió: "Tuve un viaje muy agradable de Limón a Washington. Sentí mucho la salida de la Meseta Central aquel día, pues partía con tantos recuerdos gratos de los muchos amigos que tengo allí y de los muchos días, todos tan felices, que había pasado en Costa Rica."

De otra de sus cartas copio el siguiente párrafo: "Lo que mas me gustaría es saber que pudiera volver a pasar muchos meses en un país donde tengo tantos amigos y en donde he pasado tantos y agradables días. La única cosa que pido es que no se repitan los temblores de antaño ni los leones en el camino." Se refiere aquí a los temblores de 1924, que fueron muy violentos, aunque ya estaba acostumbrado a ellos, por haber residido en El Salvador, en donde tiembla a diario. En la referencia que hace de "los leones en el camino" recuerda la extraña aventura que nos ocurrió, cuando hicimos la primera excursión al Bajo de la Hondura, acompañados por Juvenal Valerio. Acabábamos de pasar por la hacienda La Palma, propiedad de la familia Brenes Robles. Habíamos salido a caballo de San José, despues de cenar. La luna llena alumbraba esplendorosamente la antigua carretera empedrada a Carrillo. Standley iba adelante, yo le seguía y de último venía Valerio y nos proponíamos llegar antes de las diez a la casa del mandador de la hacienda de la Hondura. En sentido contrario apareció un hermoso perro danes, caminando lentamente, sin volvernos a ver siquiera. Standley me llamó la atención y entonces yo comenté que alguien de categoría debía andar por allí, pues el perro era lindísimo y al parecer muy bien cuidado. Este se detuvo y despues de mirar a todos lados, se arrodajó y acostó en medio del empedrado. Valerio se acercó a observarlo y de repente gritó: "¿Tiene alguien un arma de fuego?" "Para qué, le contesté." "Pues para matar este león." Espoleamos los caballos, volviendo a cada rato la vista hacia atrás, y cuando llegamos a la casa del mandador

de la Hondura teníamos todavía acelerado el pulso. Allí se nos dijo que, efectivamente, se trataba de un león viejo, que se había “aquerenciado” en aquella zona, pero que era inofensivo para las personas y animales domésticos. En las noches de luna gustaba pasear por la carretera, y eran muchos quienes, como nosotros, lo habían encontrado, sin mostrar intención de hacerles daño. Ni los terremotos ni los leones lograron asustarlo, pues pocos meses despues nos visitó por segunda vez.

En el Prólogo de su citada *Flora of Costa Rica*, Standley recuerda las gratas ocasiones de conversar sobre toda clase de asuntos, cuando despues de mi trabajo, que terminaba a las nueve de la noche, solíamos tomar chocolate “a la española” en la Casa España, situada en los altos de un viejo edificio de la Avenida Central. Allí “arreglábamos el mundo” a nuestra manera y no pocas veces el portero nos recordaba que tenía que cerrar, pues ya era media noche. De camino para mi casa lo acompañaba hasta la puerta de la Pensión de Julia Reyes, donde vivía, una cuadra al norte del Edificio de Correos y Telégrafos. Frecuentemente prolongábamos nuestro palique por media o una hora mas.

Fumador empedernido consumía dos o mas cajetillas de cigarrillos al día. No tenía preferencia por marca determinada. Toda clase de tabaco era bueno para él, a pesar de que creía que era una tontería ser esclavo de un rollo de hojas secas y malolientes. No aspiraba el humo y justificaba su devoción a “My Lady Nicotine” como medio fácil de tranquilizar sus nervios y mantener los dedos ocupados en algo.

Por D. Anastasio Alfaro tuvo veneración, la que se refleja en sus cartas. Conservó casi todo lo que escribió. Honró su nombre con el género *Alfaroa* para designar la Juglandácea conocida como “gaulin” (*Alfaroa costaricensis* Standley). Por su conocimiento del español leía con gusto a Magón, a Fernández Guardia y otros autores costarricenses de caracter costumbrista. Recuerdo con cariño a sus buenos amigos J. Fidel Tristán, Ramiro Aguilar, Carlos H. Lankester, Rubén Torres Rojas, Alberto M. Brenes, Jorge León, Juvenal Valerio Rodríguez y otros. Con frecuencia me daba noticias, sabiendo lo mucho que los he apreciado, de la constelación de sabios entre

la que brillaban William Edwin Safford, Joseph N. Rose, Albert S. Hitchcock, Agnes Chase, William Mann, Sidney F. Blake, William R. Maxon, David S. Fairchild, William Powell, Ellsworth P. Killip y muchos mas, siendo ya poquísimos los que aún no han pagado el último tributo.

La última vez que ví a Standley fué en New York, en el invierno de 1927. Don Francisco José Orlich, actual Presidente de Costa Rica, tenía alquilado, junto conmigo, un apartamento en un quinto piso de la calle 90. El trabajaba entonces en una casa de exportación de tejidos y estudiaba economía y finanzas en un colegio nocturno. Yo había ido a New York por razones de salud y asistía a unas lecciones de Farmacia Industrial en la Universidad de Columbia. Una noche de invierno muy crudo matábamos el tiempo jugando ajedrez y algo tarde ya sonó el timbre. Al bajar para abrirle la puerta al imprevisto visitante, recibí la grata sorpresa de que Standley en persona iba a despedirse de mí, pues al día siguiente se embarcaba para Guatemala. Había conseguido mi dirección en la casa Fajardo, mis corresponsales de entonces en New York. Hicimos café, fumamos algunos cigarrillos y, probablemente preparé un “pousse-café” con alcohol etílico puro y ginger-ale, ó lo que en aquellos tiempos de Ley Seca podía conseguirse para levantar un poco la presión. No he vuelto a verlo desde entonces. En numerosas ocasiones intenté visitarlo en Zamorano o en Tegucigalpa, pero, por una u otra razón, mi viaje se frustró. Popenoe, muy enojado, me escribió una vez que yo llegaría a Honduras solamente cuando los “zanates” se vuelvan blancos. Pero lo cierto es que los “zanates” continúan negros y perdí la ocasión de volver a departir algunos ratos con una de las mas grandes figuras de la Ciencia Botánica de los tiempos de antaño. . . .

The Floristic Work of Paul Carpenter Standley

BERNICE G. SCHUBERT

The first usable list of the known species of plants of Mexico and Central America was that compiled by Hemsley for the Botany of the *Biologia Centrali-Americana* (1879–1888). From the time Hemsley's work appeared until the years 1920–1926 it was the only available, comprehensive (though incomplete) floristic treatment for the vast area it covered. In October, 1920, part 1 of the *Trees and Shrubs of Mexico* was issued. The succeeding parts appeared at intervals¹ until November, 1926, when the fifth (and final) part was issued, concluding volume 23 of the *Contributions from the United States National Herbarium*. This major work of Paul Carpenter Standley is only a portion of his great accomplishment in providing adequate floristic treatments for large portions of North America. Just as the efforts of Hemsley were not superseded for many decades, the work of Standley still stands, unique in the field, and not yet completely superseded in any one area. For those who work on taxonomic problems in Mexico or Central America particularly, there would be but few guideposts along the way were the works of Standley not available.

It is not very often that a taxonomist develops the interest, persistence, patience, or scope to channel his efforts to the production of a study of a great floristic region; for along with the tremendous fascination of the purely botanical work is the overwhelming tedium of putting it into usable form. From a necessarily enormous fund of knowledge one must select only the essentials and discard what is not directly applicable.

¹ *Trees and Shrubs of Mexico*, Contributions from the United States National Herbarium, vol. 23: part 2, issued July 1922; part 3, issued July 1923; part 4, issued December 1924.

One must be aware of all the problems in a particular group to introduce them to others, but not to solve them all, for a flora should be an introduction and guide to an area, a foundation for more detailed work; it should not be concerned basically with monographic minutiae and yet, if properly conceived, it should lay the groundwork for many, many more detailed studies. If well done, a floristic work will serve not only the generation for which it was written but others which follow. In all these ways Standley's works have passed the tests imposed by time and use. It is an interesting commentary that now, almost 40 years after its original publication, the *Trees and Shrubs of Mexico*¹ has been reprinted in its original form and made available at approximately ten times its original cost!

I do not propose to give here an annotated bibliography of Standley's floristic accomplishments but this is an appropriate place to list some of his floras in order that we may be clearly aware of how much he has done to make known the botanical richness of many parts of North America, and how great is the debt we owe him.

Flora of New Mexico [with E. O. Wootton]. 1915.

Flora of the District of Columbia and vicinity [with A. S. Hitchcock]. 1919.

Trees and Shrubs of Mexico. [See footnotes.]

Flora of Glacier National Park, Montana. 1921.

Lista Preliminar de las Plantas de El Salvador [with S. Calderón]. Ed. 1. 1925.

Flora of the Panama Canal Zone. 1928.

Flora of Yucatan. 1930.

Flora of the Lancetilla Valley, Honduras. 1931.

The Flora of Barro Colorado Island. 1933.

The Forests and Flora of British Honduras [with S. J. Record]. 1936.

Flora of Costa Rica. 1937-1938.

Flora of Guatemala [with J. A. Steyermark, and more recently with L. O. Williams]. 1946-1963.

Much of Standley's work was accomplished before the surge of road building now taking place throughout the continent. It would be very timely at present to initiate projects to supplement his efforts, because, in the first place, new areas

¹ *Trees and Shrubs of Mexico*, parts 1-3 and part 5 reprinted, issued April, 1961 [and sold together with the original part 4].

are being made easily accessible and, secondly, many components of the flora will unfortunately be lost forever as modern civilization reaches and clears the areas. There could be no more fitting tribute to the magnificent contribution of Paul Carpenter Standley than a series of floras to supplement his own great pioneering efforts in the field.

Expediciones en America Central, 1925-26

Exploración en Costa Rica

SALVADOR CALDERÓN

El doctor Salvador Calderón fue colega y amigo íntimo del doctor Standley durante muchos años. Publicaron en 1925 la *Lista preliminar de las plantas de El Salvador*.—El texto que sigue lo publicó el doctor Calderón en un panfleto impreso por la Imprenta Nacional en San Salvador en el año 1926. Este es una selección de una carta que le escribió el doctor Standley. La traducción y resumen son del doctor Calderón, pero la historia es, sin duda alguna, tomada a pie de la letra de la carta de Standley. [Nota de LOUIS O. WILLIAMS.]

Mr. Paul C. Standley, del personal científico del Instituto Smithsonian, necesitando recoger nuevos datos para la Flora de la América Central, que tiene en preparación, efectuó un segundo viaje a Costa Rica.

Salió de Washington el 4 de noviembre de 1925 y retornó a aquella misma ciudad en la mañana del domingo 28 de marzo de este año [1926]. De una reciente carta que a su regreso me ha escrito de Washington, he seleccionado la siguiente información respecto a sus viajes:

“No pude regresar más luego, porque en esta época del año todos los vapores que llegan a Costa Rica vienen llenos de turistas y no me fué posible conseguir pasaje. Al fin tuve que tomar un vapor de la United¹ para Nueva Orleans, puerto éste que, para mí, era mucho menos cómodo que Nueva York. Llegué a Nueva Orleans el 26, después de un viaje de 7 días. Tuve la oportunidad de ver dos lugares nuevos para mí, Puerto Castilla en Honduras y La Habana.

“Estuvimos un día en Puerto Castilla, una de las fincas más grandes de la United, y un lugar que me parece sumamente interesante para la botánica. Me interesó de tal modo que es muy probable que el próximo viaje que haga a Centro

¹ United Fruit Company.

América va ser a ese puerto. Hay mucha montaña en los alrededores y una línea de ferrocarril que penetra 80 millas en el interior. Hay, además, cerca de Olanchito, un desierto muy parecido al de Zacapa, y como es una región inexplorada tal vez suministre buena cantidad de especies nuevas de plantas.

“Pasamos una parte del día en Trujillo. Es una población muy pintoresca, con varios edificios que deben tener muchos años. Tras la ciudad se levantan unos cerros cubiertos de bosques vírgenes con una altura de más de 1.200 metros. La vegetación es muy parecida a la de la costa de Guatemala; sin embargo ví algunas plantas que antes nunca había visto.”

EN LA HABANA.—“Después estuvimos un día y una noche en La Habana. Había escrito antes a un botánico de la isla de quien había recibido muchas cartas. Es el Hermano León, de los Hermanos de las Escuelas Cristianas. El llegó al muelle con automóvil, y me llevó primero a la Academia de Ciencias, un edificio magnífico, y después al Colegio. Este es un edificio con todas las modernas comodidades y ocupa toda una manzana. Hay más de 1.100 alumnos. El Hermano León, que enseña las ciencias naturales, tiene un buen Herbario y un pequeño Museo bien arreglado.

“El día siguiente me llevó a la Universidad, que tiene muchos edificios grandes y nuevos. Después fuimos a Santiago de las Vegas, a una distancia de 18 millas de la ciudad, para ver la Estación Agronómica. Tienen aquí unos árboles jóvenes de la *Omphalea* de El Salvador,¹ así como una gran cantidad de cuayotes todos bien crecidos. Por falta de tiempo no pudimos ver más que una pequeña parte de ésta, pero puedo decir que es igual a las estaciones de los Estados Unidos.

“La ciudad de La Habana tiene ahora 600.000 habitantes. Me recuerda más Nueva York que cualquiera otra ciudad que conozco. Buenas calles, muchos edificios altos y casas ricas con jardines que no sería posible encontrar en los Estados Unidos.”

¹ La semilla de *Omphalea* fué importada a Cuba, por el Dr. Mario Calvino, de Moyuta (Guatemala) donde la especie es también nativa. De la misma región de Moyuta proceden las semillas de *Omphalea* sembradas en la Estación Haina (Rep. Dominicana), según informe oficial del Dr. Rafael Ciferri, Director de dicha Estación Agronómica.

EN COSTA RICA.—“Llegué a Costa Rica el 6 de diciembre (1925). Pasé 10 días en San José haciendo pocas colecciones, y enseguida pasé a Santa María de Dota. Esperaba encontrar allí una flora como al sur de Cartago, pero no resultó así pues la región es relativamente estéril, casi sin orquideas ni helechos. Todos los bosques son de encinos, y han cortado ya la mayor parte del bosque que hace unos pocos años cubría la región. No puedo quejarme de las colecciones que conseguí aquí (2.600 números), pero en igual transcurso de tiempo hubiéramos colectado mayor cantidad en otras partes de Costa Rica. Tengo recuerdos muy felices de Santa María. La gente es muy buena y muy hospitalaria. Por primera vez en Centro América, viví en casa como de la familia. Después de más de tres semanas¹ que pasé allá, el excelente dueño de la casa no quiso recibir nada por mi hospedaje manifestando que lo había honrado con mi permanencia en su casa. En la Nochebuena, mi amigo Don Juvenal Valerio,² llegó a Santa María y me acompañó en todo el resto del tiempo que estuve en Costa Rica. Había sido designado por el Ministerio de Educación para acompañarme, honor que no había yo esperado. Esto fué de mucho provecho para mí, y ojalá algo haya podido ayudarlo en sus estudios botánicos. El es un joven de 25 años, Inspector de Escuelas en 3 cantones del Guanacaste. Tiene gran interés por la Botánica y por todos los otros ramos de las ciencias. Es un magnífico compañero y me ayudó mucho en los trabajos de colección.

“La excursión más interesante de Santa María fué la del Cerro de Las Vueltas. Este cerro tiene 3.000 metros de altura y el camino es el más pendiente que he podido ver en Centro América. La cima es casi llana, y es un páramo como el de los Andes. Es sólo en esta parte de Costa Rica que, en Centro América, encontramos páramos. Hay extensos potreros de

¹ Durante un período de un poco más de tres semanas Standley hizo una colección de unos 2.600 números, algunos por lo menos con duplicados. Considerando las condiciones climáticas de la región y que todas las muestras fueron secadas con lámparas de gas la colección era respetable, aún para un colector como Standley. [Nota de Louis O. WILLIAMS.]

² Véase el artículo con el cual el señor Valerio contribuyó a este homenaje a Standley.

una hierba muy fina con *charrales* de arbustos espesos. Pasamos el año nuevo en el cerro, en una casita donde el viento y la lluvia pasaban por todas partes. Nunca he pasado una noche como aquí con tanto frío. En el Cerro hiela durante las noches cuando no llueve y hace más frío que en los volcanes de mayor altura.

“Salimos de Santa María el 6 de enero (1926), a las tres de la mañana y llegamos a San José a las 3 de la tarde, once horas a caballo, todo el tiempo en el camino excepto $\frac{3}{4}$ de hora para almorzar.”

EXCURSION AL GUANACASTE.—“El día siguiente empaquetamos el equipaje y lo mandamos a la estación. Tomamos el tren de la mañana del día siguiente para Puntarenas a donde llegamos a las 4 de la tarde. Nos acostamos a las 11 de la noche y a las 2 nos levantamos. A las 3 salimos del puerto en una gasolina, caminando hacia el Norte en el Golfo de Nicoya.

“Entramos en el Rio Tempisque y después en el Bebedero, llegando al puerto de Bebedero a las 10—. Nunca había visto tantas aves marinas como en las orillas de estos rios, también lagaratos, millares de lapas y un número increíble de congos.¹ En esta parte de Costa Rica no matan los monos y éstos no tienen miedo de los hombres.

“En el Bebedero encontramos dos bestias que había mandado nuestro amigo Don Otón Jiménez: en dos horas llegamos a Las Cañas. Toda esta parte de Guanacaste es de llanuras donde hay grandes manadas de ganado vacuno y caballar. Es una región calurosa, árida, con mucho polvo, y me recuerda mucho el Oriente de El Salvador. Entre los árboles, abunda una de las especies de Cocobolo: hay también varias otras especies que son comunes en las bajuras de El Salvador.”

EN TILARAN.—“Gastamos dos horas más en el camino, y como a las seis de la tarde llegamos a Tilarán, lugar donde estuve más de 4 semanas. Tilarán no tiene más de 550 metros de altura, pero el clima es muy curioso. Muy cerca está una

¹ En El Salvador es raro oír dar el nombre de CONGO a los monos; sin embargo algunas niñas dicen “el mico congo.” El Diccionario de la Academia, edición 1925, trae esta palabra como de Costa Rica y El Salvador.

cordillera con altura de 750 metros; es la división entre las dos vertientes. Casi siempre sopla un fuerte viento del Atlántico, día y noche, y todas las noches y muchos de los días cae una garuba.¹ Así es que Tilarán tiene un clima tal vez más fresco que San José, la altura de San José siendo de 1.200 metros. Es casi increíble que tal lugar de la vertiente del Pacífico en la América Central tenga un clima tan frío.

“Las colecciones hechas por nosotros son las primeras que se han hecho en esta parte de Costa Rica; es seguro que hay muchas especies nuevas, aunque no tantas como yo había esperado. La región es rica en orquídeas de las que conseguí más de 600 números.

“Tilarán no es Guanacaste, esto es, la gente es de la meseta central, con las costumbres de aquella región. Se siembra allí café y aun papas. En las llanuras de Guanacaste la gente es nicaragüense en su mayor parte y las costumbres son las de Nicaragua. Ví algunas cosas y oí algunas palabras que me recordaban El Salvador—las tortillas, por ejemplo, que son muy grandes. En el regreso, que fué en la primera semana de febrero, presenciamos en Las Cañas una “vela de Candelaria,” donde hubo dos marimbas pequeñas, pero nosotros nos despedimos muy temprano.

“Tilarán es una población nueva y actualmente casi no existen casas. Debido a tanto viento las lámparas se me apagaban de vez en cuando. En la laguna del Arenal, al Norte de Tilarán, matamos dos terciopelos² enormes. Las dos bestias que nos había prestado don Otón Jiménez se salieron del potrero, muy grande, donde estaban como hacen muchas veces las bestias. Cuando salí de Costa Rica, después de mes y medio todavía no habían aparecidos. En Guanacaste las bestias no son muy caras; éstas no valen más de cincuenta dólares. Al regreso, perdimos 12 horas en el Bebedero por haber sido barrada—tal vez intencionalmente—la lancha cuando trataba de salir del puerto; eso parece ser algo corriente.”

¹ De la voz quichua Garua, llovizna.

² La culebra mencionada es una de las mas venenosas de las Americas, y es curiosa la frase “matamos dos” pues Standley tuvo siempre un miedo irracional a las culebras. El nunca se acercó a un lugar si pensaba que podía encontrarse con una culebra. [Nota de LOUIS O. WILLIAMS.]

EN LA MESETA CENTRAL.—“Regresamos a San José en los primeros días de febrero, y en las 6 semanas que siguieron hice colecciones más grandes que en los meses anteriores. La mayor parte de estas seis semanas estuvimos en la meseta central, que es la región más rica que he encontrado en Centro América. Llegamos hasta 2.060 números de orquídeas, colección más grande que la del año pasado y que ocupará por algún tiempo al Prof. Ames.¹

“Estuvimos unos pocos días en la finca del Sr. Nevermann, alemán que tiene una gran colección de coleópteros toda formada en dos años. Salí en dos excursiones con el Profesor Don Rúben Torres Rojas, una vez a Fraijanes, en las faldas del Volcán Poás, y otra a El Muñeco, al sur de Cartago.

“Tal vez la planta más rara que encontré en este año es una especie nueva de *Calatola*,² género nuevo éste que publiqué en la 3ª parte de los *Trees and Shrubs of Mexico*. En Costa Rica los árboles llevan los nombres de “palo de papa” y “palo azul” este último nombre debido al follaje verde azulado. Las nueces son comestibles. Crudas tienen el sabor del coco. Se comen tostadas y también las muelen para hacer una especie de tortillas, como las preparadas con queso.”³

¹ Cuando se considera la dificultad que se puede encontrar en el secamiento de orquídeas una colección comprendiendo unos 2.060 números hecha en un poco más de tres meses es algo fantástica. Las orquídeas constituían apenas una parte de las muchas cosas que colectó Standley. El profesor Ames y el Señor Schweinfurth publicaron muchas especies nuevas de orquídeas tomadas de las colecciones de Standley en Costa Rica. (*Schedulae Orchidianae*, números 9 y 10.) [Nota de LOUIS O. WILLIAMS.]

² *Calatola costaricensis* Standl., de la familia de las Icacináceas.

³ En el *Philadelphia Inquirer* [Sunday Morning, July 4, 1929 (error for 1926?)] publica Nell Ray Clarke una ilustrada y pintoresca descripción del viaje del Prof. Standley a Costa Rica con los siguientes títulos: “Un científico del Smithsonian, investigando un esplendoroso paraíso botánico centroamericano encuentra 500 raras especies de Orquídeas, un Arbol de papa. . . .”

También *The Literary Digest*, de Nueva York, Julio 3, 1926, da informes sobre el particular.

Paul C. Standley

LLEWELYN WILLIAMS

The Department of Botany at Chicago Natural History Museum has long been famous for the active interest it has maintained in botanical investigations of tropical America. Its herbarium collection, representative of Peru, Venezuela, Guatemala and other countries of Latin America, and the large series of economic materials for study and on display in its exhibition halls are among the foremost. During the past thirty or forty years several members of its staff, eminent in their specialty, have contributed greatly to the building of these collections. Among these Paul C. Standley figures prominently as a result of his vast collections, gathered on several expeditions, and his many publications on the plants of Mexico, Central America and elsewhere.

My first acquaintance with Standley took place on a sunny morning in May, 1928, on his arrival to assume the position of Curator of the Herbarium at the Museum. The occasion is still remembered vividly, because of a minor event. As a member of the staff, my special interest was the study of woods and in particular the forest products of tropical America. When Standley was informed of this he presented me with a set of his *Trees and Shrubs of Mexico*. Since that day this prized publication has been one of my most constantly used references, as well as a model for the study of economic plants investigated during the past thirty years in other tropical regions.

Throughout most of his publications Standley has demonstrated his broad interest in plants. His descriptions are not limited to their taxonomic characters, but—more than most systematic botanists, perhaps—he has furnished considerable information, not available elsewhere, on the local or industrial

uses of plants, and the products obtained from them, and he has recorded the countless vernacular names, whenever obtainable, of thousands of plants he collected during his field trips—names which most botanists overlook or consider unnecessary. Standley was not a “herbarium botanist”; he realized the need and advantage of studying plants in the field. He also appreciated the value of wood samples for identification purpose or as a means of corroborating the identity of corresponding herbarium specimens.

If one had an opportunity to associate with Standley—my rare privilege for almost twenty years—it did not take long to be impressed with his competence as a botanist, his ability to identify plants quickly, his industrious nature, his enthusiasm in whatever task he undertook, whether in the herbarium or in the field, and his facility in writing. He was kind and generous and, to my knowledge, he assisted two young men to pursue their education. His avid reading was reflected in his wealth of general knowledge and his ability to discourse at length on almost any subject. Modest and unassuming, he shunned publicity and seldom attended botanical meetings.

A few months after Standley joined the Department of Botany I began preparations for a botanical expedition to the Peruvian Amazon, sponsored by the Museum. To one who was somewhat unfamiliar at the time with the conditions and the problem of selecting materials necessary for field work in such a remote area, Standley's advice was invaluable. His extensive experience gained on several missions to similar areas in Central America contributed greatly to the success of the expedition. During the twelve months spent in the monotonous environment of the upper Amazon forest Standley's letters were a source of encouragement and a compensation for the lack of any other contact with the outside world. At the conclusion of the expedition Standley spent considerable time, despite pressure of other duties, in identifying a large proportion of the more than 8,000 herbarium specimens I brought back, and in distributing others among various institutions and specialists. As a result of his personal interest I was able to complete a few years later the comprehensive publication on the *Woods of Northeastern Peru*. On other occasions Standley

was always prompt in furnishing determinations of materials I had gathered on botanical expeditions to the Isthmus of Tehuantepec, Mexico, and Venezuela.

In 1928 Professor Samuel J. Record, of Yale University, School of Forestry, was appointed Research Associate of the Museum. This involved periodical visits each year to the Department of Botany to check over materials in the herbarium or wood collections. Both Record and Standley were endowed with a considerable sense of humor, and in the course of these visits a strong personal friendship developed, which prevailed until Record's death in 1944. Their mutual interest in the plants and forest-products of tropical America also led to close professional co-operation over a period of several years. Many of the herbarium specimens accompanying the wood samples that were constantly added to the famous collection at Yale School of Forestry, were identified by Standley. For this co-operation, Record and Hess in their *Timbers of the New World* paid the following tribute: "The two botanists who have rendered the greatest service to the authors are Paul C. Standley and Adolpho Ducke." Standley's researches formed the basis of many articles which appeared in *Tropical Woods*, at the time edited by Record.

Few botanists have contributed as much as Paul C. Standley to our knowledge of the plants and natural products of Latin America. His contributions in the form of publications, spanning a period of almost 50 years, are familiar to many botanists and foresters and are deposited in most botanical research institutions in the United States as well as in many other countries. The high esteem in which Standley has long been held among his professional associates is a well-merited tribute to the eminence he has attained as a systematic botanist, and should be an inspiration to others following in his footsteps.

La Exploración Botánica de Costa Rica y la Obra de Paul C. Standley

JUVENAL VALERIO RODRÍGUEZ

Costa Rica tiene una deuda de gratitud con el botánico Paul C. Standley, porque a él le debe en mucho que sea este país, botánicamente, uno de los mejor conocidos de América, al extremo de que no es posible hablar aquí de riqueza botánica, sin que el nombre del activo explorador y escritor fecundo, aparezca ligado a infinidad de especies por él nombradas como nuevas para la ciencia o por lo menos para el país.

En la historia de la exploración botánica costarricense hay tres etapas perfectamente definidas por las publicaciones botánicas que las han sellado:

Biologia Centrali-Americana, editada por Godman y Salvin, 1879–1888.

Primitiae Florae Costaricensis, de Th. Durand y H. Pittier, 1891–1901.
Flora of Costa Rica, de Paul C. Standley, 1937–1938.

En 1848 abre la etapa de la *Biologia Centrali-Americana*, y en consecuencia la exploración botánica del país, el botánico polonés Warszewicz, a quien siguieron Wagner y Scherzer, y más tarde Hoffmann, quien vivió en el país desde 1853 a 1859.

En 1856–57 contribuyó a la exploración, recorriendo la cordillera volcánica entre el Barba y el Turrialba, el botánico prusiano Hermann Wendland. Contribución también muy valiosa, la hizo el jardinero alemán Julián Carmiol, que se quedó en el país hasta su muerte en 1885.

En 1864 vino al país el danés Andres Sandoe Oersted, quien lo recorrió desde el Pacífico hasta el Atlántico, haciendo el mayor acopio de materiales; de modo que casi las tres cuartas partes de las especies citadas por W. B. Hemsley en la *Biologia* fueron colectadas por Oersted.

Entre 1870 y 1880 vinieron F. C. Lehmann, Endres y Kuntze, cuyas colecciones fueron a enriquecer el herbario de Viena. En 1875, contratado como educador vino Helmut Polakowsky, cuyas colecciones fueron al herbario de Berlín.

W. B. Hemsley, en *Botany of the Biologia Centrali-Americana*, incluyó 1218 especies de fanerógamas y pteridófitas en este inventario del conocimiento acumulado hasta ese momento sobre la *Historia Natural Centroamericana*, publicado por Godman y Salvin en cinco volúmenes que aparecieron entre 1879 y 1888, sellando la primera etapa, caracterizada por la índole de visitantes de todo ese grupo de precursores, cuyas colecciones fueron a enriquecer los herbarios europeos.

La segunda etapa, de la *Primitiae Florae Costaricensis* la abre, en ese mismo año de 1888 el naturalista costarricense y fundador del Museo Nacional, Profesor Anastasio Alfaro, al recoger la herencia científica de los precursores, publicando en *Anales del Museo Nacional de Costa Rica* (1:1-101, 1888) la lista de 1218 especies botánicas centroamericanas.

De la misma etapa es Juan J. Cooper, también costarricense, cuyas colecciones fueron enviadas al Capitán John Donnell Smith, de Baltimore, Maryland.

En 1887 vino al país el naturalista suizo Henri Pittier, para intervenir en la reforma educativa por entonces iniciada. Junto con Pittier vinieron, también de Suiza, Adolfo Tonduz y Pablo Biolley y de Alemania Carlos Wercklé, tres exploradores botánicos que colaboraron activamente con Pittier en la formación del Herbario Nacional de Costa Rica, anexo al Instituto Físico Geográfico fundado por Pittier. Al enriquecimiento de ese herbario contribuyeron también los jardineros alemanes hermanos Brade, alcanzando entre todos unos 18.000 números que representaban no menos de 5.000 especies.

En asocio de Th. Durand, emprendió Pittier la publicación de *Primitiae Florae Costaricensis*, de la cual se publicó el primer tomo en Bruselas, en 1891, y el segundo en San José, en 1901. Desgraciadamente no se alcanzó a cubrir todas las familias, pero lo publicado constituye una obra clásica, cuya consulta es absolutamente necesaria para quien quiera continuar la investigación en el futuro.

Por aparte, el Dr. Pittier, que estuvo en el país hasta 1903, publicó en Washington, en 1908, su obra *Ensayo sobre Plantas usuales de Costa Rica*, de gran utilidad para el botánico y para el agricultor.

En esta segunda etapa el Dr. Pittier asume caracteres de guía, iniciando, con la formación del Herbario Nacional dependiente del Instituto Físico Geográfico y con una serie grande de publicaciones sobre las plantas del país, una nueva tendencia, más nacional, que permitió que se interesaran en las tareas de la investigación botánica un grupo de costarricenses, que colaboró en adelante con los botánicos visitantes.

El Profesor Alfaro, que abrió la segunda etapa con la publicación de la lista de plantas de la *Biología*, abre también la tercera como Director del Museo Nacional, nuevo depositario del Herbario organizado por el Instituto Físico Geográfico. Colabora con él el Profesor Alberto M. Brenes, botánico costarricense de formación ginebrina—encargado de la conservación en incremento del Herbario Nacional, quien agregó durante esa tercera etapa muy valiosas colecciones. Sus series de orquídeas, junto con las de Wercklé y los Brade, le permitieron a Schlechter hacer sus publicaciones sobre Orquídeas de Costa Rica.

Atraídos por las riquezas botánicas del país vinieron sucesivamente, botánicos del prestigio del Cap. John Donnell Smith, por mucho tiempo considerado como la mayor autoridad sobre botánica centroamericana, Dr. William R. Maxon, del Museo Nacional de Estados Unidos, especialista en helechos. Dr. O. F. Cook y C. B. Doyle, especializados en palmas. Los doctores J. M. Greenman y C. W. Dodge, del Missouri Botanical Garden; el Profesor H. E. Stork, de Minnesota; H. Sydow, de Berlín, especialista en hongos parásitos, quien además publicó los materiales colectados por Brenes.

Esta etapa se caracteriza por el florecimiento de botánicos costarricenses o residentes, entre los que se destacan C. H. Lankester, principalmente por sus colecciones de orquídeas enviadas al Kew Garden y a Washington, Dr. Otón Jiménez, Profesores Rubén Torres Rojas, Ramiro Aguilar, Fidel Tristán, Manuel Valerio, Fernando Solís Rojas y Manuel Quirós Calvo, lista a la que se agrega el nombre del autor de esta

reseña, quien considera un privilegio el haber sido designado por el gobierno de Costa Rica como auxiliar del señor Standley, y haber podido después, desde la Dirección del Museo Nacional, contribuir en cuanto estuvo a su alcance para la publicación de *Flora of Costa Rica*. Para todo este grupo, el señor Standley fué, desde su posición en el Herbario Nacional de Estados Unidos, un maestro y un consultor.

La última contribución de la época la hizo Giorgio Cufo-dontis, de la Expedición Austriaca dirigida por el Dr. Porsch, cuya lista de plantas coleccionadas constituye un buen contingente, como lo son también los cientos de publicaciones a que han dado origen las colecciones hechas en el país y dispersas en muy diversas series, revistas científicas, memorias, anuarios, boletines y monografías, cuya revisión demanda mucho tiempo y mucha paciencia.

De igual valor resultan obras formales como *Timbers of Tropical America*, de Samuel J. Record y Clayton D. Mell (New Haven, 1924), y aun la propia del Dr. Standley *Trees and Shrubs of Mexico* (Contr. U. S. Nat. Herb. vol. 23, 1920-26), porque en estas se describen árboles que constituyen la riqueza y variedad de nuestros bosques.

Esta etapa la cierra Paul C. Standley con la labor de gran síntesis, necesaria para poner juntos los resultados del esfuerzo de tantos colectores, cuyas series botánicas se guardan en los herbarios de muchos países; y la labor no menos difícil de revisar la literatura referente a las muchas colecciones hechas durante esta etapa y aun a las correspondientes a las dos etapas anteriores, para armonizar la nomenclatura y reducir a sinonimia lo que fuera del caso. A pesar de que esa revisión de literatura ocuparía casi toda una vida, la labor de Standley no se redujo solamente a eso; él determinó las plantas de casi todas las familias que los colectores costarricenses le enviaban, y él mismo quiso recorrer el país para ampliar y verificar sus listas con nuevos materiales botánicos, más completos y mejor conservados, y para apreciar el colorido y la belleza de las plantas en su propio ambiente, cosas que desaparecen en la muestra botánica y que no deben pasar inadvertidas para quien aspire a comunicar en sus escritos la emoción que inspiran el silencio de las altas selvas, el olor a bosque que proviene



Photograph courtesy Jason R. Swallen

STANDLEY IN 1927

de la combinación de mil perfumes, o el colorido infinitamente variado de las frondas y de las flores. Por esto, Standley visitó el país en 1923–24 y en 1925–26, bajo los auspicios del Museo Nacional de los Estados Unidos, recorriendo en su primera visita rincones tan ricos y variados como La Palma, La Honduras, Las Nubes, El Coyolar, Río Grande de Tárcoles, Navarro, La Estrella, Orosi, La Carpintera, Volcán Poás, Volcán

Turrialba, La Colombiana y Guápiles; y en su segunda permanencia, a más de repetir excursiones de su primera visita, amplió su campo de acción visitando Santa María de Dota, Tilarán, Lago Arenal, Volcán Barba, Fraijanes, Pejivalle y Cairo, agregando a las colecciones anteriores unos 15.000 números, que le dieron plena autoridad para escribir la mejor y más completa Flora del país, no sólo porque esas colecciones le facilitaron el análisis de los materiales botánicos previamente acumulados y el estudio de las publicaciones hechas hasta esos días, sino porque le permitieron comunicarle a la publicación sabor de cosa familiar y no de fría sistematización.

Trasladado el señor Standley a trabajar en el Field Museum of Natural History, hoy Chicago Natural History Museum, publicó allá su *Flora of Costa Rica* en los años de 1937 a 38, sellando la tercera etapa de la investigación botánica del país, incluyendo para Costa Rica 187 familias de fanerógamas, 1.514 géneros y 6.085 especies, y por sobre todo, abriendo con sus publicaciones las puertas a una nueva generación de botánicos costarricenses, que han de mantener el ritmo siempre ascendente de la investigación botánica del país, durante una cuarta etapa que se ha iniciado con la reapertura de la Universidad Nacional.

Paul C. Standley

CHARLES H. LANKESTER

It has been my good fortune to meet several of the able botanical visitors to Costa Rica and to help them by local knowledge of the country to spend their time here to good advantage—and by going along with them to pick up a working knowledge of some of the rich Costa Rican flora. My first contact here was with Henry Pittier, who invited me to return to Costa Rica in the autumn of 1904 and it was through him that I got to know Carlos Wercklé, Pablo Biolley and Adolfo Tonduz. Through my friendship with these botanists I came to know several of the prominent visitors to Costa Rica and so probably to know Paul Standley, who stayed for a time with us at Las Cóncevas. It must have been in 1925 that he let off the fireworks for my little daughter Pamela on December 8, always thus celebrated here.

Paul was a delightful companion in the woods. His aim was to collect 300 specimens a day and this he usually achieved with a battery of primus stoves, no slight feat in some of the woodland huts that were his temporary quarters in such difficult climatic conditions as those of the Estrella valley at 4,700 feet and up; of the Cerro de la Muerte; and of Santa María de Dota.

Paul added greatly to the known flora of Costa Rica and we owe him a deep debt of gratitude for his *Flora of Costa Rica*, and hope that soon there may be a similar work on the ferns. One of his more interesting finds here was *Puya dasylirioides*, so far separated from its allies of the paramos of South America. This Costa Rican paramo species differs from its congeners in being a swamp lover.

Today much of the forest that he knew has vanished but I am sure that could he come again, more than thirty-five

years later, he would enjoy the greater mobility the visitor now has—to see as much of the country in a few days as formerly was possible only in months.

It has been my good fortune to make two visits to Honduras in recent years and on both of these occasions to visit with Standley every day. The years have taken their toll, as they must with all of us, for in his youth he was a dynamo in the field—perhaps the most active collector who ever visited Costa Rica.

Semblanza de Paul C. Standley

JORGE LEÓN

El impacto de la obra de Paul C. Standley en el conocimiento de la flora de América Tropical, puede juzgarse mejor si se consideran sus antecedentes. La exploración científica de Mesoamérica no fue tan intensa como la de ciertas áreas sudamericanas, y tiene las características de una exploración incidental, fragmentaria y carente de coordinación. Esto se refleja bien en la compilación hecha por Hemsley, para la *Biología Centrali-Americana*, en la que se incluyen desde las expediciones españolas del siglo XVIII hasta las entonces recientes de Hinds, Barclay, Hayes y otros.

Al inicio de este siglo, entre el Río Grande y Panamá, sólo dos áreas habían sido exploradas adecuadamente: la vertiente atlántica de México, por C. A. Purpus, y Costa Rica, donde Pittier y sus asociados habían realizado una exploración más completa y sistemática. Debe indicarse aquí también que los botánicos norteamericanos no habían puesto mayor atención a los trópicos. La naturaleza de la exploración requería en América Tropical un trabajo de pionero. Es decir, no la investigación detallada, sino la visión más general y la clasificación básica de las plantas, la taxonomía alfa de que se habla en la nueva sistemática. Esta dará una visión general del problema, para basar en ella el trabajo más detallado y complejo del futuro. La enorme riqueza de la flora; las dificultades naturales para el trabajo de campo, en una época embrionaria para las comunicaciones; la dispersión de las colecciones anteriores en herbarios europeos y americanos, y la falta de una compilación moderna, pues sólo se contaba con la de Hemsley, hacen más patente el valor de la obra pionera de Standley.

Parece natural que el trabajo de Standley se iniciara en México. Esto resulta como corolario de sus estudios en las

montañas Rocosas y de su *Flora of New Mexico*, escrita con Wootton. Fue eso lo que estimulara su interés por las plantas del sur, y lo moviera a estudiar la vegetación de la zona pacífica de Méjico. Fue después de una exploración más intensa de ese país que publicó sus *Trees and Shrubs of Mexico* (1920-1926), cuando trabajaba para la Institución Smithsoniana. Anteriormente sus estudios sistemáticos habían aparecido con el nombre de *Studies on Tropical American Phanerogams* (Nos. 1-3, 1914-1919); sin embargo, el libro sobre Méjico, cuyo valor aún no ha sido sobrepasado, es la obra más completa de Standley y la que sirvió de guía para sus futuras publicaciones. A pesar de haber transcurrido ya varias décadas, no existe para esta obra sustituto alguno, y al presente está en vías de reimpresión. En esta obra Standley hizo acopio no solamente de los elementos botánicos, sino también de tópicos históricos y antropológicos, que constituyen una información invaluable.

A la época comprendida entre los años 1924-1930, corresponden sus viajes de exploración por Centro América, en los cuales recoge enormes colecciones y visita lugares que eran aún desconocidos desde el punto de vista científico. Como resultado de estas expediciones, apareció en 1925, en colaboración con Salvador Calderón, su obra *Lista preliminar de las plantas de El Salvador*, y sus diversas publicaciones sobre la flora de la zona del Canal de Panamá. Una de ellas, *Flora of the Canal Zone*, publicada por la Institución Smithsoniana en 1928, constituye quizás la obra más atrayente de Standley, por lo completa y bien presentada. De esta misma época es su larga serie de artículos en las actas de la Academia de Ciencias de Washington, sobre plantas centroamericanas en general y en particular de El Salvador, así como algunas notas sobre distribución de floras y monografías de géneros.

Los estudios iniciados en la Institución Smithsoniana se continuaron cuando Standley pasó al Museo de Historia Natural de Chicago, en el que publicó sus monografías sobre Rubiáceas de Bolivia, Colombia, Ecuador y Venezuela. Esta rica y compleja familia ha recibido su atención especial. Sus trabajos en ella tienen una importancia permanente y están esperando estudios más detallados, ya que este grupo

presenta características notables para trabajos sobre evolución en los trópicos. Como continuación de sus publicaciones anteriores sobre nuevos descubrimientos, aparecieron en Chicago sus *Studies of American Plants* (I–XI, 1929–1940), más tarde, con J. A. Steyermark, *Studies of Central American Plants* (I–VII, 1940–1947).

Las publicaciones de floras de diversos países corresponden también a este período, y se inician con *Flora of Yucatan* en 1930; *Flora of the Lancetilla Valley, Honduras* (1931); *The Forests and Flora of British Honduras*, con S. Record (1936). Después de muy intensos trabajos de colección apareció *Flora of Costa Rica* (I–IV, 1937–1938); y aún en publicación *Flora of Guatemala*.

Después de su retiro de Chicago, Standley ha vivido por varios años en Honduras y ha trabajado en el herbario de la Escuela Agrícola Panamericana, en El Zamorano. Sus contribuciones han aparecido en el órgano de esa Escuela, la revista *Ceiba*.

Hay un aspecto que merece especial atención en la personalidad de Standley. Es su interés vivo, más allá de lo puramente inquisitivo, por la vida y costumbres de los pueblos centroamericanos. Eso le ha permitido adentrarse en ellos, y sin artificio alguno, adquirir una comprensión íntima de sus defectos y virtudes.

Su dominio de la literatura de esta área, quizá hecha sin plan ni método, es tan completa por su conocimiento crítico, que la envidiaría cualquier catedrático de esta especialidad. El ver y vivir del ambiente centroamericano lo ha llevado a quedarse en él, no como extranjero retirado, sino como un centroamericano más. Su simpatía por estos pueblos se deja ver claramente en sus escritos científicos. En la introducción de su *Flora of Costa Rica* ha dicho que éste ha sido su trabajo más agradable, y no solamente se refiere en este sentido a los aspectos puramente botánicos, sino también por la acogida que encontró en el país y en sus habitantes.

Standley ha abierto el camino para el estudio de las plantas de México a Panamá, por el cual seguirán muchos otros. La tarea que se impuso es enorme aún para un hombre de su capacidad y tenacidad para el trabajo. Por eso pueden hallarse

en su obra muchas lagunas o errores. Al partir en sus estudios de norte a sur, no pudo tomar en cuenta en todo su valor, por ejemplo, el aporte enorme que la vegetación de Sud América hiciera en las áreas centroamericanas. Pero puede decirse que las pocas limitaciones de sus trabajos, están compensadas por la intensidad y amplitud de ellas, y que pasarán varias décadas antes de que sus obras dejen de ser la base fundamental de los estudios de la flora de Méjico y Centro América. Standley trabajó, como se dijo anteriormente, en la taxonomía alfa, la primera etapa de ella, en la que es necesario crear una imagen general de la flora sin entrar en los detalles de su origen, evolución y variabilidad. En ese sentido los que trabajamos en América tropical tenemos que continuar su avance y agradecerle el hecho de haber echado una base firme para lograrlo.

Como latinoamericanos y como trabajadores en las ciencias biológicas, nuestros sentimientos hacia Paul C. Standley tienen tres aspectos: la gratitud por haber abierto la brecha en un terreno difícil y servirnos de guía; el respeto por su integridad científica, y su personalidad completa; y la estimación por su comprensión de la gente, y por haber logrado tan bien entender el espíritu de los pueblos hispanoamericanos.

Don Pablito

PAUL H. ALLEN

In a recent attempt to jog my increasingly fallible memory I had occasion to look for Standley, Paul C(arpenter) in the massive tenth edition of *American Men of Science* and was shocked to find this famous name, known to every botanist and naturalist with even the most casual interest in tropical American plants, followed by a terse "Bot, see 9th ed." One is led to suspect, of course, that the heroes of our present scrap-metal-in-space age will, in their turn, be given similarly summary treatment, when public fancy turns to other fields of endeavor, but it would seem a matter of simple justice to record what manner of man this great pioneer is and was, while those of us who know him are still able to bear witness to his monumental labors in his chosen science.

My own acquaintance with don Pablo Standley, as he was affectionately known in Central America, dates from the summer of 1935, when, as a Missouri Botanical Garden student, I was given the chore of taking a sizable fascicle of difficult herbarium specimens that had defied the efforts of our entire professional staff, to Chicago, as a last resort, before they were ignominiously consigned to "Indet." bins, as fodder for future generations of museum insects. Most of these plants were from Panama, where I had recently spent my first six months in the tropics, and where local naturalists were already saying "Let's look it up in Standley," as they reached for his *Flora of the Panama Canal Zone*. Many of the people that I had been associated with there had known Standley well during his collecting days, and described at length his energy and enthusiasm, but I had only the vaguest idea of what to expect when I stepped into his office in Chicago Natural History Museum, and was somehow surprised to find a slight, wiry, bespectacled,

scholarly looking individual of under medium height, seated behind a long wooden work table, piled high with herbarium specimens. He was obviously busy, but greeted me cheerfully enough, and agreed, after a few questions concerning mutual acquaintances in Panama, to have a look at my plants. This was to be my first experience with the extreme rapidity with which he worked, and I watched with increasing fascination as he chain-smoked his way through the packet, writing names from memory on perhaps two-thirds of the lot, and darting out into the herbarium with the quick, bird-like motions that I later came to associate with him, to verify some of the more difficult species. This entire performance took less than an hour and left me with a lasting impression of nervous energy, coupled with an unequaled acquaintance with tropical American plants.

More than ten years of sporadic correspondence were to follow this preliminary contact, after my return to the tropics, but I was not to see Standley again until December of 1946, when I visited Honduras for the first time. I came to know him much better after his retirement, when we were both permanently located at the Escuela Agrícola Panamericana, but at the earlier time, of which I write, he was embarked, with Julian Steyermark, on his monumental *Flora of Guatemala*, and had begun collections, with Louis Williams, in Honduras, Nicaragua and El Salvador, with the view of eventually establishing himself at the Escuela, where he and Williams would develop a comprehensive herbarium and library, and complete a flora of Middle America to close a long and productive career. It was in this setting, under the sympathetic eye of Wilson Popenoe, Founder and Director of the Escuela Agrícola Panamericana, that I now found him, full of plans for the future and for the new science building that was to house the rapidly growing collection of plants assembled by Williams and himself. Paul Shank and Archie Carr, who were to establish sound reputations in other fields, were there at the time, and I well remember the stimulating discussions and trips to the slopes of Cerro Uyuca, which towers dramatically above the Zamorano valley, and to the cloud forests on the long, winding road to the Rosario mine. This plan, for a Middle American



Photograph by Paul H. Allen

FIELD TRIP IN HONDURAS, 1946

Pablo Caceres, Paul J. Shank, Paul C. Standley, Antonio Molina R., Louis O. Williams

flora, was not to materialize, for reasons beyond Standley's control, but the groundwork, in the form of the best herbarium and library in Central America, was completed and is still available, should interest in the project be revived. Work on his other floras continued, without difficulty, in the interval, with volume after volume being added to the long series.

In 1957 Standley moved to Tegucigalpa, to a setting of great natural charm, high above the city, with far views of the pine hills and misty tablelands that had always reminded him of his early days in New Mexico. One can hope that he derived some satisfaction from having taken his place among the immortals in his chosen field, and in the knowledge that thousands will continue to "look it up in Standley" for many years to come.

La Orden del Quetzal

MANUEL ORELLANA CARDONA¹

EXCELENTÍSIMOS SEÑORES EMBAJADORES DEL ÁREA DE CENTRO-AMÉRICA, MÉXICO Y DE LOS ESTADOS UNIDOS DE AMÉRICA;
HONORABLES SEÑORES MIEMBROS DE LOS ORGANISMOS INTERNACIONALES: ICA, STICA, SCISP Y SCIDE;
HONORABLES SEÑORES MIEMBROS DE LA COLONIA AMERICANA RESIDENTE;
HONORABLE SEÑOR DOCTOR PAUL C. STANDLEY;
DAMAS Y CABALLEROS:

Hace un poco mas de veinticuatro lustros, un célebre diplomático estadounidense, el Dr. John L. Stephens, acometió la proeza de venir a esta región istmeña, a campo traviesa para iniciar las relaciones diplomáticas de su país con nuestra naciente-nacionalidad, las Provincias Unidas del Centro de América, y para concertar con élla un tratado internacional muy prometedor.

Su interesante viaje, salpicado de muchas peripecias vividas en uno y otro confin de la Región, tiene para nosotros—precisamente por la veracidad de sus aventuras y por el sabor que éllas trashuman—una importancia excepcional, no solo porque fué la primera versión autorizada que se dió extrafronteras de la vida social y política de nuestros pueblos a raíz de la Independencia, sino también, porque el Dr. Stephens, fué el primero que dió a conocer al mundo, en su valor científico y arqueológico, los vestigios de nuestras Ruinas Mayas descubiertas en nuestro suelo, al publicar su comentado libro:

¹El Excelentísimo Señor Embajador Orellana al imponer al Dr. Standley, en la Embajada de Guatemala en Tegucigalpa el 11 de octubre de 1961, la Orden del Quetzal, condecoración máxima de su gobierno, pronunció el emotivo discurso que aquí se publica. Al final se encuentra una copia de la comunicación oficial del presidente Ydígoras de Guatemala en la que se otorga la Orden del Quetzal al Dr. Standley. [*Nota de LOUIS O. WILLIAMS.*]

Incidentes de Viaje en Centro-América, Chiapas y Yucatan, en el año de 1839.

Pues bien, a partir de esa época, ya no se pensó más en la condición peyorativa de nuestros indios; ya no fueron mirados éstos como un desecho humano trashumante por los montes, bajo los cielos tórridos; ni fueron vistos más como el eslabón perdido que unía a las especies inferiores con el hombre. Nó. Desde entonces se empezó a ver a los indios con mayor respeto y admiración, y se empezó a reconocer que sus antepasados fueron los creadores de una civilización tan prodigiosa como la egipcia y la de Oriente, de la cual nos habían legado muy asombrosas enseñanzas en sus códices, templos y ciudades. Era nuestra América pues, la cuna de una cultura tan respetable como la que nutriera a la civilización de Europa.

Y si en el orden arqueológico fué para nosotros una revelación los estudios é investigaciones del Doctor Stephens y los de su valiente compañero Frederick Catherwood; en el orden biológico, o más estrictamente, en el orden botánico, otro americano del Norte, el Doctor Paul C. Standley, aquí presente, ha hecho estudios valiosísimos acerca de nuestra flora tropical, muy característicos de la zona istmeña, y especialmente de los suelos de Guatemala, por cuya contribución merece nuestra profunda gratitud. Y ha logrado todo eso, nuestro gentil amigo, con ese mismo fervor y entusiasmo conque se entregan los hombres de ciencia al objeto de sus estudios, recorriendo jadeante nuestros campos, sierras, lagos y costaneras, y vibrando de pasión y de alegría a cada nuevo ejemplar que descubriera y que sumara a sus ricas colecciones de investigador.

Y es así como el Doctor Standley ha dedicado toda su vida a la noble disciplina a que su vocación le inclinara desde niño, obteniendo en el largo período de su especialización— muy señalados triunfos desde el año de 1909, época en que inició su brillante carrera como Curador en la División de Plantas del Museo Nacional de los Estados Unidos, hasta 1928; luego como Curador del Herbarium, Museo Field de Historia Natural, Chicago, Illinois (1929-1950); y finalmente, como Curador del Herbarium de la Escuela Agrícola Pan-americana, Zamorano, Honduras (1947-1955).



PRESENTACIÓN DE LA ORDEN DEL QUETZAL

Charles Robert Burrows, Embajador de los Estados Unidos de América en Honduras; Paul C. Standley; Manuel Orellana Cardona, Embajador de Guatemala en Honduras, en el momento de recibir Standley la Orden del Quetzal en la embajada de Guatemala en Tegucigalpa.

Como fruto de sus estudios y de su paciente labor investigadora, el Doctor Standley, ha producido los siguientes libros: (a) *Flora of New Mexico* (1915); (b) *Flora of District of Columbia* (1919); (c) *Trees and Shrubs of Mexico* (1926); (d) *Plants of Glacier National Park* (1927); (e) *Flora of the Panama Canal Zone* (1928); (f) *Flora of Yucatan* (1930); (g) *Flora of Lacantilla Valley* (1931); (h) *The Forests and Flora of British Honduras* (1936); (i) *Flora of Costa Rica* (1937); (j) *Flora of Guatemala* (1946).

Vemos pues, por la calidad de estos trabajos, que el Doctor Standley, ha consagrado gran parte de su vida a las plantas de Centro América, y que gracias a sus esfuerzos y a los que hicieron los ínclitos varones que le han precedido y seguido en sus pasos, el mundo periférico del Istmo sabe, que en esta región privilegiada de la tierra, existe en nuestra flora un venero inagotable de riqueza, capaz de colmar el tonel de las Danaides y de superar con la diversidad y abundancia de sus recursos, el subdesarrollo económico de nuestros pueblos. Sabe asimismo, que nuestros productos explotables en escala a corto o largo plazo, abre las puertas para un abastecimiento inter-

nacional, como se ha hecho ya correlativamente con la cochinilla, con el café, con el banano, el algodón, el té de limón, el azúcar y otros productos tropicales, los cuales han surgido del humilde reducto de nuestra jungla al suntuoso mercado internacional. Y todo, para beneficio del hombre en sus múltiples satisfacciones. Es la forma promisorio con que el trópico se proyecta en el universo, pese a las siniestras amenazas que le afligen.

Es por ésto que el Gobierno de Guatemala, en un acto de justicia hacia los hombres que han volcado su talento y energías en pró del bienestar humano, ha dispuesto otorgar la Condecoración de la Orden del Quetzal, en el Grado de Comendador, al ilustre hombre de ciencia, Doctor Paul C. Standley, como testimonio de su reconocimiento por su fructífera labor realizada.

HONORABLE DOCTOR STANDLEY

Al cumplir tan honrosa misión, por Acuerdo en pleno del Gobierno de Guatemala y en nombre del Presidente de la República, cuya representación ostento, me complace imponeros en este acto sencillo, pero muy significativo, las insignias correspondientes de la citada Orden del Quetzal, las cuales simbolizan: HONOR AL MERITO.

MIGUEL YDIGORAS FUENTES

PRESIDENTE DE LA REPUBLICA DE GUATEMALA
Y JEFE SUPREMO DE LA ORDEN DEL QUETZAL,

En uso de las facultades que le confieren el inciso 30 del Artículo 168 de la Constitución de la República, el Artículo 40.—del Decreto Legislativo Número 855 y en Consejo de Ministros,

ACUERDA:

- 1.—Otorgar la Condecoración de la Orden del Quetzal, en el Grado de COMENDADOR, al botánico estadounidense Doctor PAUL C. STANDLEY, por su trabajo científico en el campo de su profesión y especialmente por su investigación sobre la flora guatemalteca y consiguiente

aporte bibliográfico de la materia, con lo que el nombre del país ha recibido amplia difusión.

- 2.—El Ministro de Relaciones Exteriores, Canciller de la Orden del Quetzal, queda encargado de dar cumplimiento al presente Acuerdo y disponer lo conducente para la imposición de la Insignia respectiva y entrega del Diploma correspondiente.

DADO EN EL PALACIO NACIONAL DE GUATEMALA, a los veintisiete días del mes de abril de mil novecientos sesenta y uno.

COMUNIQUESE

(f) M. YDIGORAS FUENTES

Rodolfo Martínez Sobral, *Ministro de Gobernación*

Enrique Peralta Azurdia, *Ministro de la Defensa Nacional*

Manuel Bendfeldt J., *Ministro de Hacienda y Crédito Público*

José Luis Cruz Salazar, *Ministro de Comunicaciones y Obras Públicas*

Luis González Batres, *Ministro de Educación Pública*

Manuel Antonio Montenegro, *Ministro de Agricultura*

Joaquín Prieto B., *Ministro de Economía*

Mariano López Herrarte, *Ministro de Salud Pública y Asistencia Social*

Carlos Cipriani, *Ministro de Trabajo y Bienestar Social*

Rodolfo Martínez Sobral, *Ministro interino de RR. EE.*

Canciller de la ORDEN del QUETZAL

My Acquaintance and Experiences With Paul C. Standley

EARL EDWARD SHERFF

My acquaintance with Mr. Standley may be said to trace back for more than half a century—more precisely, to the summer of 1908. As assistant to the Desert Botanical Laboratory of the Carnegie Institution of Washington, I was building up a working-herbarium for the staff members to use as needed. I had collected a seemingly new species of *Boerhaavia*. I could not find it in the various works of reference, nor could Professor John J. Thornber of the University of Arizona, to whom I took materials, identify it. Upon his recommendation I allowed him to send my materials to "Professor Standley of the New Mexico Agricultural College," who was engaged at that time in a monographic study of the group. As I recall at this distant date, my plants were not cited by Standley in his publication when it was issued, but Professor Thornber told me of having heard from Standley the latter's determination of my plants as being a new species that he based upon another collector's material. Naturally this left with me a slight pang of regret that my own plants had not gotten a monographer's public mention.

I cannot recall seeing Standley thereafter or having any contact with him until the International Congress of Plant Scientists met at Ithaca, N.Y., in 1926. At that time he kindly posed with Dr. Albert S. Hitchcock for a photograph by me.

I think it was at that time that Standley, in an off-hand and apparently unpremeditated way, confided to four or five of us that he had known for some time of a serious error once made by some prominent botanist in the selection of a generic name, an error that had gone entirely unnoticed for many years by the world's workers; he had refrained from "letting



Photograph by E. E. Sherff

STANDLEY AND ALBERT S. HITCHCOCK IN 1926

the cat out of the bag” lest “hundreds of names would have to be changed” and he did not want to see such a thing happen. I remonstrated vigorously, stating that delay in uncovering the error publicly would only postpone the day of reckoning, which assuredly would have to come some time, resulting in more confusion than ever. But he was adamant. I never recurred to the matter with him and can only suspect that he eventually altered his resolve or that he was instrumental in getting the generic name in question designated a “*nomen conservandum*.”

Some time later, the annual convention of the American Association for the Advancement of Science was held in Kansas City, Missouri. A preliminary conclave of botanists at the Missouri Botanical Garden at St. Louis, was planned by its Director, Dr. George Moore. This occurred on a Sunday just before the convention. Perhaps fifty or sixty botanists attended and in the evening were the Botanical Garden's guests at a dinner at the Hotel Coronado. Dr. A. S. Hitchcock sat at the same table as did I and a dozen or so others. A lull in the dinner chat occurred as time went on, and suddenly Dr. Hitchcock spoke out rather loudly to those of us nearest him and asked if we had heard about Standley. He went on to tell us that Standley was going to leave his post at Washington and go to Chicago, where he had been offered a better position at the Field Museum.

My impressions of Standley, growing out of numerous contacts with him at the Museum, are varied. He seemed always a nervous type, inclined to be standing up when making examinations and comparisons of plant specimens. He seemed always to be working against time, and seldom would sit down to an extended or detailed study of materials. He seemed to have a truly prodigious range of knowledge concerning generic identities. This enabled him to "distribute" incoming unlabeled exsiccatae to their proper genera with great speed. In this particular respect he was a most valuable staff member for the Museum. He was shy in manner and openly boasted that he would have no part in appearing in public as a speaker on any subject. Indeed, I never knew him to speak before any audience in public.

Among all my botanical acquaintances, Standley would stand out as "the indefatigable worker." His remarkable speed with a typewriter enabled him to reel off with no difficulty reams of manuscript for the press. His printed works reached amazing proportions. (According to a visiting couple who happened some twenty years ago to have come to Chicago from the East and to have stayed some weeks in the apartment building where Standley lived, he ran his typewriter night after night till eleven or twelve o'clock and thus was the object of the other tenants' bitter hostility. After

hearing this, I came to feel that much of his apparent nervousness around the herbarium might easily have been the result of overwork and attendant failure to take sufficient rest in his spare time.)

Further than the above sketchy remarks, I cannot well presume to go. Standley and I were by nature temperamentally so unlike that we never came to be intimate friends. I cannot therefore pretend to an intimate knowledge of him as a man or expand extensively upon his character as only an intimate acquaintance might do.

I will close by saying that I must confess to having had, down through the years, a feeling of friendship for Standley and of admiration for his titan-like scholarship in the field of Systematic Botany. He was associated with the Museum's Department of Botany during years of tremendous development and expansion, and it is but fitting to honor him for the part he played.

Una Impresión Personal de Paul Standley

JOSÉ CUATRECASAS

Hace ya muchos años, estando en Europa, oía hablar a mi antiguo amigo Francis Macbride de Paul Standley y de su alto prestigio como fanerógamo del Museo de Chicago. Además, conocía alguna de sus grandes obras como *Trees and Shrubs of Mexico*, *Flora of Costa Rica*, *Flora of Yucatan*, Rubiáceas del norte de Suramérica, etc., las cuales me eran indispensables para determinar las plantas del trópico americano que caían en mis manos en el Jardín Botánico de Madrid. Mas tarde, a partir del año 1939, encontrándome en Colombia, donde hubo que trabajar sin disponer de biblioteca básica para iniciar un herbario de la flora colombiana, tuve que remitir duplicados de mis colecciones a varios taxónomos de los Estados Unidos que se prestaban gustosos a ayudarme. Paul Standley fué uno de los más cooperativos y fue siempre el que más rápidamente contestaba a mis envíos correspondiendo, casi a vuelta de correo, con largas listas de nombres, especialmente en las familias de las rubiáceas, amarantáceas, nictagináceas, moráceas, etc. Con este motivo tuve correspondencia directa y cordial con Standley durante varios años, solo interrumpida por algunos de sus viajes. Pero mi deseo de conocerle personalmente no se satisfizo hasta que llegué a Chicago en 1947. Standley regresaba entonces de una exploración por América Central de donde trajo enorme cantidad de ejemplares de plantas. Tenía ya, entonces, 63 años, pero demostraba el vigor y dinamismo de un joven; pequeño y enjuto, se movía como una saeta del laboratorio al herbario y de la planta y microscopio a la máquina de escribir; no cesaba un momento. De este modo completaba su gran *Flora of Guatemala*. Standley clasificaba rápidamente sus plan-

tas; tenía una facilidad extraordinaria para reconocer las familias y los géneros, orientándose inmediatamente cuando veía un ejemplar aun careciendo de flores y frutos. Su memoria era asombrosa en el tiempo en que lo conocí y su agudeza mental e intuición sistemática, realmente, fuera de lo común. Standley poseía, indudablemente, este raro sentido de saber asociar formas afines y de encontrar las afinidades de las plantas no solo por los caracteres técnicos sino por un penetrante sentido de percepción por la fisonomía. Me encantó verle trabajar, ver como velozmente iba poniendo nombres a montones de ejemplares que formaban pilas en su mesa, ver como llenaba hojas de papel a máquina y, sobre todo, me encantó oírle. Su conversación era animada, por el brillo y movilidad de sus ojos y por el énfasis de la frase, y variada. No solo hablaba de botánica sino que muchos otros aspectos de la ciencia y de la vida le interesaban. Era un fiel adicto a los países centroamericanos y se le veía feliz relatando las características, la vida, política y costumbres de allá. Standley había recorrido Costa Rica, Guatemala, Nicaragua, Honduras, El Salvador, escudriñando su flora y recogiendo miles de colecciones. Estos viajes lo convirtieron en un enamorado no solo de las plantas en sí, de la flora de esos países, sino de su paisaje natural y humano también. En sus conversaciones aparecía invariablemente el decidido defensor de las excelencias de los países centroamericanos y de las cualidades de sus habitantes, entre los cuales, decía, se encontraban sus mas entrañables amigos. La sinceridad y profundidad de esos sentimientos están bien demostrados por haberse trasladado ya desde el año 1949 a vivir a Honduras. Por otra parte los herbarios del museo de Chicago y el de la Smithsonian Institution, con los miles de plantas que encierran, determinadas por Standley, son testigo del extenso conocimiento que tuvo este hombre de la flora tropical y subtropical americana y ello unido a su obra impresa, muestra la prodigiosa actividad desarrollada por Standley en beneficio de la botánica de este continente.

Standley and the Rubiaceae

JULIAN A. STEYERMARK

Standley's interest in plants encompasses the entire plant kingdom. In addition to his extensive knowledge of the families of phanerogams, he has always exhibited keen interest in the cryptogams, as shown by his large series of collections of algae, lichens, fungi (especially rusts and smuts), and bryophytes. But of all the kinds of plants Standley studied or in which he became interested, probably none occupied so much of his time and attention as the Rubiaceae, one of the largest families of flowering plants.

The Rubiaceae are usually prominent among collections from tropical and subtropical America. It is only natural, therefore, that in his mastery of plants from these regions, Standley successfully studied this family, soon becoming the authority for the New World kinds.

Following his publication on the Flora of New Mexico with Wootton in 1915, Standley became occupied with the identification of tropical American flowering plants. This paved the way for his attention to the New World Rubiaceae. His first publication which concerned itself with Rubiaceae appeared in 1914. It was entitled *Studies of Tropical American Phanerogams*, and was based on collections made by Dr. Henri Pittier in Colombia and Costa Rica. It also included studies on a proposed flora of Panama. In this publication Standley described his first new genus of Rubiaceae, *Nothophlebia*, based upon one of Pittier's collections from Costa Rica. In the same paper he revised two genera, *Sommeria* and *Watsonamra*, and described new species of Rubiaceae from Costa Rica, Panama, and Colombia.

From 1914 until 1953 a steady stream of descriptions of new species and genera, and occasional revisions of New World

Rubiaceae poured forth in his publications. A survey of his work reveals the description of the amazing number of 21 genera and 1,115 species of Rubiaceae new to science. Of these all but 86 new species were described by Standley himself (7 published in co-authorship with Dr. Louis O. Williams and 79 in co-authorship with myself). Costa Rica, a country for which Standley always had a warm regard, has the distinction of being the one from which were described both his first and last published new genera of Rubiaceae. In both cases the specific name used was *costaricensis*: *Nothophlebia costaricensis*, published in 1914, and *Stomandra costaricensis*, published in 1947.

From 1914 to 1928 Standley was principally concerned with the identifications of Mexican and Central American collections, resulting in the descriptions of many new species of Rubiaceae. During this time he made collecting trips to Mexico, Guatemala, and Panama, obtaining material for his monumental *Trees and Shrubs of Mexico*, *Flora of the Panama Canal Zone*, and *Flora of Barro Colorado Island*. He prepared the account of the Rubiaceae for the *North American Flora*. The first part of this work appeared in 1918 but it has not been completed. Forty-two new species were published in this treatise, but a large number had been published elsewhere. In 1928 Standley brought out an account of the Liebmann collection of Rubiaceae. Between 1925 and 1927 thirteen parts of a series entitled *New Plants from Central America* were published in the *Journal of the Washington Academy of Science*. Many of these were devoted chiefly to new species of Rubiaceae.

After Standley left the Smithsonian Institution in 1928 to go to Field Museum of Natural History (now Chicago Natural History Museum), he devoted even more attention to the Rubiaceae and examined a larger representation of South American material than he had previously studied. Although he was occupied with the preparation of floras for Yucatan and the Central American countries, he still spent considerable time on the study of large collections of Rubiaceae sent to him for study from some of the larger European herbaria. These collections were necessary to supplement the material

in North American herbaria for his comprehensive treatments of the Rubiaceae in five South American countries (Colombia, Venezuela, Ecuador, Bolivia, and Peru). The results of this study were published in 1931 and 1936 in volumes 7 and 13 of the Botanical Series of Field Museum of Natural History. In these works Standley revealed our lack of knowledge of the Rubiaceae existing in those countries. This work brought out the following numbers of genera and species then known:

Peru: 86 genera and 479 species, 13 described as new (many had been previously described by Standley).

Colombia: 80 genera and 443 species, 103 described as new.

Venezuela: 81 genera, 2 described as new; 351 species, 32 described as new.

Ecuador: 45 genera and 178 species, 39 described as new.

Bolivia: 63 genera and 228 species, 31 described as new.

Altogether, Standley described two new genera and 218 new species of Rubiaceae from these countries. Yet he indicated then that the known collections, which served as a basis for understanding the Rubiaceae, were relatively meager—that not only the Rubiaceae but also the rest of the flora of those countries were still poorly known.

The truth of Standley's prediction has already been borne out by new collections of Rubiaceae. From Venezuela, for example, 47 new species were described by Standley and the present author, based upon collections made by myself between 1943 and 1945. Moreover, the expeditions into the hinterland of southern Venezuela conducted since 1948 by Dr. Bassett Maguire and his colleagues of the New York Botanical Garden have brought to light an even greater number of undescribed species and genera.

The works which Standley completed on the Rubiaceae of the South American countries mentioned were of vital importance to the botanists who were sent down by the Cinchona Mission during World War II to locate stands of *Cinchona* and secure samples of bark for testing and ultimate exploitation. From the information contained in Standley's publications it was easy to find the localities for each species involved in the study.

In 1928 Standley began a series of publications entitled *Studies of American Plants*. Eleven parts were published in the Botanical Series of Field Museum of Natural History, the first one appearing October 24, 1929, and the eleventh (in which the present author participated) September 10, 1940. This series encompassed the entire gamut of families of flowering plants from tropical American collections sent for identification to Standley, but the Rubiaceae occupied a major share of space and attention in many of the parts published. In order to study South American Rubiaceae, he examined over 5000 sheets that were sent to him on loan from herbaria in Europe. In the interval of eleven years covered by this series of publications, Standley described 560 new species and 9 new genera.

Standley's floristic work for Central America yielded many new species of Rubiaceae. In 1937 and 1938 the four parts of his *Flora of Costa Rica* were brought out, with 20 new species of Rubiaceae described. Standley planned a flora of Guatemala and invited the author to participate as co-author. He planned a new series of publications as an outlet for descriptions of the new species resulting from expeditions made to Guatemala between 1938 and 1942. This was entitled *Studies of Central American Plants*. Seven parts were issued, the first one appearing September 30, 1940, the last one October 22, 1947; all were published in the Botanical Series of Field Museum of Natural History. One new genus and 39 new species were described in the Rubiaceae by Standley and myself, mostly from Guatemala. At the same time, Woodson and Schery were working on their *Flora of Panama*, and Standley was sent many Rubiaceae from Panama for identification. This resulted in his publishing one new genus and 10 new species of this family between 1938 and 1941. He was also an active contributor to *Tropical Woods*, and between 1926 and 1936 described no less than 3 new genera and 15 new species of tropical American Rubiaceae in this journal.

In 1937 Standley prepared to work on a flora of middle Central America, and between 1947 and 1949 he collected in El Salvador, Honduras, and Nicaragua. When he retired from Chicago Natural History Museum in 1950 and went to

the Escuela Agrícola Panamericana in Honduras, he started a new series of publications in the journal *Ceiba*. In 1950 he described 4 new species of Rubiaceae from Honduras in this publication. Between 1950 and 1952 he wrote, with Williams, a series in *Ceiba* entitled *Plantae Centrali-Americanae*, in which 7 new species of Rubiaceae were described from Honduras and Costa Rica.

The floristic work on Mexico and Central America with which Standley occupied himself would ordinarily have required the attention of several botanists. That he had been able to accomplish fundamental work on the floras of these countries, and had also become the outstanding authority on American Rubiaceae demonstrates the magnitude of his efforts. He had the ability to work faster and more intently than most botanists. He was able to keep abreast of the thousands of collections being sent him for identification, and his prompt determinations insured for him an abundance of material for study. He wasted neither time nor effort and the new taxa resulting from the study of collections sent him were always immediately prepared for publication.

The efforts to keep up with these collections and to continue his many floristic works left Standley little time for doing monographic work in the Rubiaceae. Thus, except for his earliest efforts in this family, the major part of his work in the Rubiaceae was devoted to the description of novelties. That he was able to do all this is even more remarkable and uncanny. His work in the Rubiaceae is a basic one and a testimony to the greatness of the man.

Paul C. Standley

MAXIMINO MARTINEZ

El nombre de Standley está íntimamente ligado con todas las actividades botánicas en México, pues sus numerosos trabajos acerca de nuestra flora son de imprescindible consulta. Su obra *Trees and Shrubs of Mexico* (1920–1926) es indispensable en nuestras bibliotecas. Se agotó desde hace muchos años y tal ha sido la demanda, que en Washington se acaba reimprimir, y sigue siendo utilísima aun sin ser revisada ni adicionada con los géneros y especies que se han encontrado después de 1926.

No menos importantes son la *Flora of Yucatan*, ediciones de 1930 y de 1945, esta última con la colaboración del Prof. S. J. Record; la *Flora of British Honduras*, también con la colaboración de Record, y la *Flora of Guatemala* (1946–1958) que ha elaborado asociado con su compañero de muchos años J. A. Steyermark. Ha escrito sobre la *Flora of Costa Rica* y la *Flora of El Salvador* y es autor de trabajos monográficos sobre Moráceas y Rubiáceas y sobre otros muchos vegetales.

Su bibliografía es copiosísima y el análisis de su labor científica es largo y difícil y no voy a intentarlo. Por otra parte, hacer su elogio, es superfluo. Baste decir que México y la América Central tienen para Standley una inmensa deuda de gratitud y que en todas partes se admira su asombrosa y fecunda actividad.

Retirado de sus actividades oficiales vivió muchos años en Tegucigalpa, Honduras, donde siguió trabajando, especialmente con la flora centroamericana, en colaboración con el Dr. Louis O. Williams.

La noticia de su muerte, acaecida en esa ciudad el 2 de junio próximo pasado, ha causado honda pena en los círculos científicos.

Yo tuve el privilegio de conocerlo en 1939, cuando él todavía estaba en Chicago, y quedé gratamente impresionado de su profundo saber, de su bondad exquisita y de su excelente voluntad para ayudar a quienes acudían a consultarle.

Sean esta líneas un humilde tributo a su memoria y la expresión de mi pena por su ausencia definitiva.

Standley and Tropical American Botany

F. R. FOSBERG

Botanists of all kinds, when they visit the tropics, commonly feel overwhelmed by the sheer number and diversity of the plants. Accustomed, at home, to dealing with one or two thousand species in relatively few genera, to well-marked families, mostly with a few basic types of plants, they suddenly come in contact with floras of many thousands of species, with new families and with old families in strange disguises.

Some of them simply give up. Others make collections with the intention of learning what all these new things are. They look for manuals with which to identify their specimens and usually find that there are none, or that the available ones are useless. They may get some names from local botanists, but often it is only after they are back home that they discover how difficult it is to replace the numbers in their field notes with plant names. Then they begin to ask where they can get help.

Newcomers to the botany of tropical regions, and even some of the old hands, during the 1920's, 30's and 40's, enjoyed an advantage not available to their successors of the present day. During those decades, the answer was, almost always, if they had been in the New World tropics, "Send them to Standley," or if the Old World tropics, "Send them to Merrill." These two men were alike in their prodigious knowledge of plants and their willingness to help others less experienced or less well endowed with photographic memories. Not a few botanists, now well-known for their work on tropical floras and tropical ecology, can look back with gratitude to lists of quick identifications made by these two men which enabled them to start their

work without a lifetime of preparation. These preliminary determinations, though not claimed to be 100 per cent correct, must in many cases have furnished the help needed to keep a young botanist interested in the tropics. And the fact that a man could know a tropical flora so well must have encouraged some of them to try to do likewise.

Although this is a book about Paul C. Standley, it is impossible to discuss his place in American botany, as the one to turn to for help with plants of the American tropics, without drawing a parallel with the exactly similar function of Elmer D. Merrill for the Old World tropics. Each could run through a pile of specimens from his region and name them about as fast as he could write down the names. Each, by this remarkable ability, was able to bring enormous collections to his institution in return for preliminary determinations.

American botany will always be in their debt for the collections they built up, as well as for their help to countless individuals. It was characteristic of Standley that he was not bothered in the least by plant groups with fearsome taxonomic reputations. A quick glance over some of his publications containing miscellaneous systematic notes will show how generally he covered the seed-plant field. The family Rubiaceae presents more intrinsic difficulties than most other groups of tropical plants. Possibly for this reason, the Rubiaceae seemed to be a special challenge to Standley. He dealt successively with the Rubiaceae of Mexico, Venezuela, Colombia, Bolivia and Peru. He described numerous new species and even genera from Central America and Brazil. The first four parts (covering ten tribes) of the Rubiaceae for the *North American Flora* were published, but the enormous volume of determinations and the flow of material from South America more and more consumed Standley's time and the undertaking of the monumental *Flora of Guatemala* apparently precluded finishing it. Perhaps also, the vast genus *Psychotria* may have had something to do with his failure to complete the Psychotrioideae of this family.

An evaluation of Standley's work on the Rubiaceae is difficult, if not impossible, at this stage of knowledge of

the taxonomy of the family. Inheriting an unnatural and unsatisfactory system of classification of the Rubiaceae, Standley tried to live with it, rather than to overhaul it. He never attempted to rearrange the tribes and genera, although he doubtless knew how unnatural they are. His contributions were mainly at the species level, describing countless new ones, reducing others to synonymy. He fitted his new genera as best he could into the existing system, as arranged by Schumann in 1891. In some cases, he may have adopted too willingly the accepted generic circumscriptions, as in *Cinchona* and its allies. In *Cinchona*, also, his opinion that far too many species had been described was certainly correct, though his own delimitation of the reduced number left much to be desired. In any case, he has been followed, perhaps far too blindly, by every one concerned with tropical American Rubiaceae. No one else has had the courage to more than nibble around the edges of the problems. It was far easier to "send them to Standley" and accept his opinions than do the hard detailed work needed to gain any understanding in this family.

Perhaps the unfortunate things about being a recognized expert are that one's errors are accepted as blindly as one's correct judgments, and that there is a tendency for others to avoid the work necessary even to understand what the expert says or does. Standley's work on the American Rubiaceae was certainly the best that was done during the time, but also it probably had much to do with the backwardness of the classification of the family by making it unnecessary for others to look seriously at these plants. It is probably safe to say that 95 per cent of the tropical American Rubiaceae in American herbaria were either determined by Standley himself, or by comparison with specimens determined by him. Such determinations by comparison will be the only thing feasible until someone appears with ability comparable with that of Standley and is given the time to master this most difficult of all tropical families. Meanwhile the Rubiaceae will remain "Standley's family."

Standley—Sixty Years Ago

OTTO M. SMITH

I knew Paul Standley as a senior in Springfield High School. He attended this high school only one year and graduated in 1903. The courses he took and the grades he received indicate that he was a good student: English, 94; chemistry, 87; Latin, 95; German, 99; and Greek, 90. One of his high school teachers, who is still living, remembers him as "a very good student."

Paul spent three scholastic years at Drury College, and there we became rather closely associated in school work and in the Scientific Society. He entered as a freshman in the fall of 1903 and completed the junior year. While in college he made excellent grades and had the highest grade record of anyone who majored in science. He was a member of the Drury Scientific Association and held the following offices: 1904, Director of Botany; 1905 and 1906, Secretary.

He was not a ladies' man and took little or no part in the social activities. I do not think that he was ever in any college prank and there were quite a few in those days.

In the 1905 October issue of the *Drury Mirror* is a note that he read a paper on "Arctic Explorations." He spoke of the various theories concerning the Arctic Sea and how they were abolished by Perry in his remarkable dash for the pole. Paul also described the perils and dangers encountered in the expedition. In the October issue of 1905, page 13, was another article written by Paul on a geology field trip.

A short note appeared in the "Science Bulletin" of the *Drury Mirror* for January 17, 1906. This is a brief report of a trip we made to the Pierson Creek Mines, and mentions some remarks that Paul had made on the vegetation found on Bald Knob.



SCIENTIFIC SOCIETY, DRURY COLLEGE, ABOUT 1906

Second from left, Otto M. Smith; center, Paul C. Standley.

“Otto M. Smith and Paul Standley give a short history of the Pierson Creek mines and a description of the geological formations of that district. According to history an explorer came up the James River near where Pierson Creek empties into the James as early as 1818 and found ore in the bed of the stream. The Osage Indians at one time worked this deposit to obtain lead for their bullets. Trappers and hunters came up from White River for the same purpose. One very remarkable thing about these mines is that they are located in the Hannibal shales. This shale easily decomposes, forming what is called ‘gumbo.’

“Mr. Paul Standley contributes some remarks on the flora found on the Butte or Bald Knob, which is situated in Polk county about two miles west of Morrisville, just west of the Sac River. The observations were made early in May, 1905, hence the summer and autumn flora were not very noticeable.

The soil was very poor and in some places no plant covering existed. The plants were more abundant about the foot of the butte."

Tribute to Standley

T. G. YUNCKER

In the fields of scientific or other activity occasionally there will appear a person of rare and exceptional ability, endowed with superior knowledge, skill, and energy, and he will produce results of unusual magnitude. Such a person was Paul C. Standley.

When one surveys a bibliography representing his work, one wonders how any one person could possibly accomplish so much and, at the same time, such useful work within the physical limits of a single lifetime. Within the span of about a half century, extending from his *Flora of New Mexico*, published in 1915, in collaboration with E. O. Wootton, to his more recent work on the Guatemalan flora, one finds a long list of most significant publications. Among these, to mention some, in addition to the *Flora of New Mexico*, are his *Flora of Washington*, done with A. S. Hitchcock, *Flora of Glacier National Park*, *Flora of the Lacantilla Valley, Honduras*, *Forests and Flora of British Honduras*, with S. J. Record, *Flora of the Panama Canal Zone*, *Flora of Yucatan*, *Flora of Costa Rica*, and the monumental *Trees and Shrubs of Mexico*. All of these cover areas containing large numbers of species, and any one of them alone would represent a major project for the average botanist. That he has been able to accomplish so much is ample testimony to his characteristic persistence and unflagging industry. In spite of an obviously crowded program of research, he has always been more than generous with his time in aiding other workers in the naming of collections, offering suggestions, and otherwise helping with his unlimited store of taxonomic knowledge.

It has been my privilege to visit and collect in some of the areas previously worked by Standley and I have always

found his floras of these regions unusually helpful. Our understanding of American plants has been greatly enriched through his devoted endeavors, and students of the flora of North America can be thankful for his work. No tribute can overestimate the value of his accomplishments in this field.

Note to the Editor

Dear Louis:

It gives me a great deal of pleasure to join you in sending a very special note of praise for my old and good friend Paul Standley. I have most pleasant memories of my associations with him and with my many other friends at the Museum, where I have been Research Associate for many years.

With best regards,

ELLSWORTH P. KILLIP

Personal Recollections of Paul C. Standley

PAUL RUSSELL

Toward the end of the year 1909, Paul C. Standley arrived at the United States National Herbarium from New Mexico, where he had been working on the flora of that state. I had been taken on in the herbarium earlier in the year as a scientific aid and then as a "messenger." From the very start I had been greatly impressed with Standley's boundless energy; he always put in a very full day.

In February, 1910, Dr. J. N. Rose and Standley and I went on a collecting trip to the west coast of Mexico, where for more than ten weeks we worked seven full days a week. Most of the actual collecting was done by Rose and Standley. It fell to my lot, a greenhorn, to dry the specimens, of which there were about ten thousand by the end of the trip. Frequently, after the day's collecting was supposed to be over, Standley would go out for another pressful of specimens.

The evenings were spent in numbering and tentatively identifying the specimens and putting them in presses; often there were as many as four large ones. If there was time enough, Standley would entertain us by reading some type of humorous literature.

Although Standley had little time for anything but serious work, I remember one day when he and I were out on top of a rather high hill in Texas and discovered a good-sized boulder balanced nicely near the top. We recklessly pushed the boulder over, and both of us watched with child-like glee as it tore down the side of the hill, knocking over large cacti and other plants.

Introduction to Standley

MARGERY C. CARLSON

My first introduction to Paul C. Standley was through the Introduction to his *Flora of Costa Rica*. It was such an inspiration that I immediately read the Introductions to his other volumes on the plants of Mexico and Central America. I was deeply impressed by the prodigious amount of work, both in the field and in the herbarium, which Mr. Standley had done, by his great enthusiasm for the countries in which he worked, and by his profound "feeling" for the people of those countries. The inspiration led me to a desire to meet him personally.

By appointment and without formal introduction, I called on him at Chicago Natural History Museum, feeling keenly that he should not be kept from his work. I wanted only to let him know how much I had enjoyed his writings and how much I wanted to learn something about the plants and the countries which he had described so vividly. He might have "brushed me off," but he sat back in his chair, smoking one cigarette after another, and talked about the countries he had enjoyed so much and the fun of plant collecting. I could have listened to him for hours. This meeting led to the most interesting years of my career, to learning something about taxonomy, to collecting plants in El Salvador, Honduras, Costa Rica and Mexico, and to the writing of a taxonomic monograph, for all of which he gave incalculable help and encouragement.

He proved to be a most sincere, generous and patient teacher and he would always assist me with my difficulties—and they were many. After he left Chicago Natural History Museum, I had the great pleasure of being associated with him for two months during 1952 at the Escuela Agrícola

Panamericana at Zamorano, Honduras, where he arranged for my residency while I collected plants in that country. I visited him there twice afterwards.

He was much too modest (although he did not like egoism or aggressiveness in others) and I was pleased to hear that the government of Guatemala had honored him with the Order of the Quetzal—the highest honor that country bestows on its outstanding leaders. He has given a monumental heritage to his fellow workers, the importance of which cannot be measured.

After writing the above, I was privileged to visit with Dr. Standley in March of 1963, just a short time before his death. We conversed about our earlier associations and proudly he showed me his medal of the Order of the Quetzal. He talked about the longevity of members of his family and said he expected to live to be one hundred years old.

Tales Out of School and Other Yarns

LOUIS O. WILLIAMS

The "tales and yarns" which follow would seem to have a place in a contribution such as is this series of papers. Some of them, perhaps, show a facet of Standley's personality which few people knew.

Standley began his series of collection numbers presumably more than fifty years ago. This series reached 99,999 while he was in Honduras, in November 1946, and rather than put six ciphers on his labels he decided to begin a new series starting again with Number 1. The number of collections in this second series which he had made before he quit active field work ran into the 30,000's. The collections made by Standley over a life time, largely in the tropics, exceeded 130,000. If this number has been surpassed by any other botanist I am unaware of it.

During the many years during which Standley was Curator of the Herbarium in Chicago he must have prepared literally hundreds of lists of determinations of those plants which he had studied for others. He was also a prolific writer of letters. There remains in Chicago a folder or two of correspondence that represents his years here, nothing more. I suspect that the last time he came back from Honduras to Chicago he decided "this is it"; he was going to clean his work room and files so that no one would have to worry about old correspondence. It must have gone to the furnace room to be destroyed.

Standley was one of the most observant collectors with whom I have ever had the pleasure of being in the field. When he came to Honduras to collect in 1946-47 he had then had more than thirty years of experience with the

flora of Central America. His memory concerning the species of plants to be found there was without parallel, and if he did not recognize a plant that he found, it usually turned out to be rare or perhaps even new. His memory did fail him occasionally in very peculiar ways. He would glance at a specimen and write a name, including authorities, on the label without reference to the herbarium or to a book. Recently I found a *Liquidambar* in the herbarium as a species of *Platanus*. The superficial resemblance is there, but a second look would have shown the differences.

Standley usually hired a boy as an assistant when he "settled" in a place to collect. The duty of the boy was to carry the field press, run errands, know the local names of all the plants, and be able to talk—or rather, to listen. Knowing the local plant names was the most important of these several chores, for Standley insisted that he get them. No small boy knew the local names of plants as well as did Standley, and woe unto the boy who came up with local names that Standley did not believe.

This insistence on local names brought curious results occasionally, for the country people of Central America as a whole know quite well the common names of the plants among which they live. However, to know the common names of all the myriads of plants in some tropical regions is patently impossible, and, besides, most of them have no use and probably no name. Recently I came across the common name "*xicacoque*" on a label. Somebody, I suspect, had put his boy up to telling Standley that this was the name of the plant. It looks like "Chicago Kid" to me. That name missed "making" the *Flora of Guatemala* by a hair.

Elmer D. Merrill and his wife spent several winters at our home in Honduras during the time that Standley was occupying the guest quarters which we had built into our science building to accommodate "visiting firemen." Both men had a wide knowledge of the world's flora and each apparently had a deep respect for the other's knowledge and accomplishments. Working habits were much the same. During those years Standley was working actively with Central American flora and Merrill usually brought with him

manuscript that could be worked on as well in Honduras as in Boston's "frigid" winter weather. Neither bothered the other until about four in the afternoon, when both had finished all they were going to do that day. Over a highball or a bottle of beer there were some tall yarns told until the call for dinner came.

Standley was equally fluent in Spanish or English and had an enormous vocabulary in both languages; yet he reacted to these two languages in quite different ways. Speaking in English to another he might be critical of information which he received in reply to a question; for example, the best manner to arrive at a certain place. If, on the other hand, he asked the same question in Spanish and if the answer was in Spanish he would not hesitate to accept the information as presented. In general he was inclined to accept whatever was told to him in Spanish.

Standley rarely rewrote manuscript that he had prepared. With rare exceptions he wrote well, clearly, and often with deep insight. The descriptions of new plants were quickly prepared. A typewriter, a microscope and dissecting tools, a rule, a hand lens and the references were the tools he used. The description was written out, with carbon copy, on the typewriter as he made his observations of the plant being described. Furthermore, the description was written in Latin, so there was no problem of a description to be translated. The comment was written in English or Spanish, depending on where it was to be published. When he finished a description he read it for typographical errors and was through with it; it was ready to go to the printer.

Standley retired from the Chicago museum and came to live "permanently" in Honduras. He moved into the quarters we had provided in the science building for visiting botanists and ate with staff members in the dining room. His needs were few—a few clothes, an enormous number of cigarettes daily, but few other things. His modest retirement income more than supplied all of his needs and he probably used no more than a quarter, perhaps even less, of it for his own needs. I suspect, however, that there were few students around the school who came with a hard luck



Photograph by Louis O. Williams

PAUL C. STANDLEY ABOUT 1948

An informal portrait taken in Honduras

tale and needed a *lempira* or two who went away empty-handed. He never spoke of this but I am sure that what the boy took away with him was a gift, not a loan.

Soon after Standley had first come to Honduras, he, Molina and I left Zamorano before daylight hoping to arrive at San Lorenzo on the Bay of Fonseca before dark. The distance was not great, about 150 kilometers, but the way was no boulevard and the country through which we passed was pristine territory for botanists—laden with plants to waylay the unwary. Half way along, at Sabana Grande, was a *pensión* where lunch could be obtained. We were late, and the dining room was closed; so we went along. Three or four hours later, and San Lorenzo still some hours away at our rate of travel, Molina and I realized that Standley was about famished. His 90 pounds or so did not have the reserve to carry him so many hours without food. We learned, in due course, that although Standley was capable of deep concentration, and endless talk on occasion, he was punctual about one thing—meal time.

There were at Zamorano, in Honduras, a number of men with the name Paul: Paul Shank, Paul Allen, Pablo Cáceres, who occasionally assisted Standley or myself in the field, and Paul Standley. These men were, of course, all called Pablo by the Spanish-speaking students and staff. To distinguish Standley from the others, since physically he was much the smallest, he became known as don Pablito.

Standley had no use for snakes, or for bees and wasps, and he had an unreasoning fear of them. *All* snakes were venomous, deadly and to be avoided. Bees and wasps *all* had poisonous stingers and notoriously bad dispositions, so were given a wide berth.

T. D. A. Cockerell, to whom bees were the finest of God's creatures, visited us one winter. He had long since become inured to the sting of bees and would take them from his collecting net with his fingers. Cockerell often got stung, of course, and when he did would sometimes say, "Oh, oh, a female!" I am sure that to Standley this method of handling bees was the purest nonsense and that he winced each time Cockerell reached into his net to remove a bee.

Archie Carr, a herpetologist, who spent some time at Zamorano, was given a small boa which had been hurt. Carr released the boa, which was quite harmless, in his room in the science building. Standley's work room was adjacent and in order to get to the library he could go through Carr's room more quickly than by going around. One day, pre-occupied by some problem, he went through Carr's room and almost stepped on the boa before he saw it. Standley apparently believed that Carr had put the snake there on purpose, and so far as I know he never again spoke to him.

Standley, Molina and myself had gone to a savanna in the Río Yeguaré valley early in the rainy season to spend the day collecting. One thing predictable about the early rainy season is that you may expect to get wet if you go collecting. We saw a shower coming and nowhere was there shelter that we might take. Standley quickly removed all of his clothes and put them into his field press. The shower came and soon passed by. Standley took his dry clothes "out of press" and put them back on, while Molina and I, considerably wet, chuckled for the rest of the day at his method of keeping his clothes dry.

Recently (June, 1962) I visited Standley in Tegucigalpa and among other things told him about the progress that was being made with the *Flora of Guatemala* and about the next two parts that were to appear. There was no comment or suggestion about these, only the question "What are you going to do about the Compositae when you get there?" A good question that!

One of the things that I had hoped to do when I first went to Honduras was to lay the ground work for a flora of three of the Central American countries, Honduras, Nicaragua and El Salvador. Toward this end funds were secured from the United Fruit Company to construct a science building at Escuela Agrícola Panamericana, furnish the building with those things necessary to its purpose and start building up a reference library (to cover all natural sciences) and a herbarium for biological Central America. In the early years Molina and I had no comparative material to use in the determination of the mass of specimens which we were collect-

ing, so bundles of specimens went to Standley in Chicago at frequent intervals for determinations. Determinations for the sendings were always prompt and it was a rare occasion when we did not have determinations back within a month, even for shipments of several hundred specimens.

When Standley finally came to Honduras to stay he entered into this project as enthusiastically as any younger man might have done, and it is partly due to his enthusiasm that we were able to build our collection up to some 80,000 sheets in relatively few years and to distribute widely a large number of duplicates from all of the Central American countries, including British Honduras.

Standley often had strong opinions about the writings of other botanists and did not hesitate to express them. An example of this type of comment is that quoted below from the *Flora of Guatemala*, which has reference to Britton and Rose's fragmentation of the genus *Pithecolobium*:

Some of these genera were based upon fruit characters and have some basis for separation. Others were based on shape and number of leaflets, which would scarcely be considered generic characters by even not very conservative botanists. What purpose is served by such splitting of the genus, other than increasing the number of generic names to be remembered and cluttering an overloaded synonymy with many new nomenclatorial changes and combinations, is not obvious.

There is a letter in the herbarium from Floy Bracelin to Standley concerning one of Mrs. Mexía's collections of *Blakea* which had been included by error in materials sent to Standley for determinations. The Melastomes, sent to Dr. Gleason, had contained the same species. Both men recognized the *Blakea* as a new species and both had provided an identical specific name for the plant. When Standley received the letter about it he mounted it on a herbarium sheet and wrote in the corner "*Blakea Mexiae* Gleason." This is quite typical of Standley, for while he would provide determinations in almost any tropical American family he was not interested in trying to get something published before some one beat him to it. There was enough work for everyone, and to spare.

Standley always pretended to heap great scorn upon those botanists who made an "expedition" to the tropics and then proceeded to do all of their "exploring" within a stone's throw

of their car. I often had the feeling that this "ploy" was intended to attract attention somewhere else rather than to express a soundly based feeling of his. It perhaps may have been an unconscious castigation of himself, for I suspect that, in later years at least, it was a rare occasion when he got more than a few minutes' hike from the roadside, whether for physical or other reasons.

I never knew Standley to get especially excited about discoveries in the Central American flora, except once. He had found a small specimen of an unrecognized cycad growing in the public park in Danlí and was quite excited about it. The same day Dr. Merrill and I arrived there to take him back to Zamorano. We stayed over to try to find more plants and did find some fine specimens in several patios. I photographed Merrill and Standley together with some specimen plants, which later were described as *Dioon Mejiae*.

Somewhere, somehow Standley acquired an active dislike for petunias, or at least he pretended to have done so. One of his pet projects was to try to get his listener to join him in founding a society for the extinction of petunias—all petunias.

Standley, once a prolific writer of letters, had in recent years answered very few of the letters sent to him. George N. Jones, while visiting the museum, said that he would like to write a letter to Standley. The address was provided and I commented that while I was sure that Standley would appreciate a letter he probably would not answer it. Dr. Jones wrote the letter and for some reason included my remark. A reply came back, and promptly, asking Jones to pass on his thoughts (not complimentary) concerning my veracity.

